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DEVELOPMENT TEST PLAN - QUALIFICATION  
DYNA-SOAR (STEP I)

R. K. Rasmussen, et al

Boeing Company  
Seattle, Washington

18 September 1961

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Jan. 15, 1962

Document revised to reflect current status of qualification testing.

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## FOREWARD

The development test plan for Dyna-Soar (Step I) Program is composed of the following three volumes:

- Vol. II Development Test Plan - Design
- Vol. IV Development Test Plan - Qualification
- Vol. VI Development Test Plan - Design Integration





This document, Volume IV is prepared for purposes of summarizing the total qualification test plans and monitoring their implementation.

This document will be revised only when significant changes in the scope of qualification testing occur. The schedule and reference data included in the schedule summary of the test plan is included for reference purposes only.

Dyna-Soar qualification will be limited to ensuring that the equipment will safely, adequately and efficiently perform its intended functions. Generally, Dyna-Soar equipment is not required to be qualified to the extent the Air Force would specify for an operational weapon system.

### Test Brief Numbering

Test briefs are numbered in sequence within numbered sections which are basically consistent with the Dyna-Soar program element breakdown. The sections are listed in the index.

1.1.1.6	<b>QUALIFICATION TEST PLAN</b>		1	
Program Element No.			Brief No.	
<b>1. Item Tested</b> Dyna-Soar Nose Cap Assembly Spec. & Dwg. No. (s)      D2-7382-1 Used-On Dwg. No.  Supplier      Chance Vought Corporation Supplier's Address      Box 5907, Dallas, Texas Supplier's Part Number 				
<b>2. Schedule Summary</b>				
Task	Reference Doc. No.	Submittal Dates Schedule   Actual	Approval Date      By	
Test Plan		8-14-62		
Test Requirements	 Final	9-14-62		
Test Procedures	Doc	8-14-62		
Start Test		11-26-62		
Complete Test		12-21-62		
First Status Report*		12-17-62		
Final Report		1-22-63		
<b>3. Summary of Tests Required</b>				
Qualification tests will be performed on two preproduction nose caps and will include the following: <ul style="list-style-type: none"> <li>(a) Thermal gradient and load test - Max. thermal gradient conditions in combination with design condition dynamic pressures or loads (approx. 40 min. run)</li> <li>(b) Dynamic Tests - Simulating dynamic conditions, including acoustical and mechanical vibration (approx. 30 min. run)</li> <li>(c) Extreme Temperature Tests - Highest and lowest temperature expected, conducted in an oxidizing atmosphere.</li> <li>(d) Functional Checkout of installed temperature sensing and pressure transmitting systems.</li> </ul>				
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>				
No special facilities or test equipment required.				
<b>5. Test Conducted by:</b>				
Organization		Location		
Chance Vought		Dallas, Texas		
<b>6. Required Test Witnesses</b>				
Organization	2-5526 Dyna-Soar Support Unit - Struct. Tech. 2-6132 Dyna-Soar Airframe Design Unit			
<b>7. Remarks</b>				
 To be determined at later date.				
Date 1-15-63				
1-15-62 *submitted monthly thereafter 2-6181-0-5		<b>14</b>	D2-5697-16 Vol. IV	
			Page	13

FUSELAGE

1.1.1.7	<b>QUALIFICATION TEST PLAN</b>		1
Program Element No.			Brief No.
<b>1. Item Tested</b> <b>Windshield Glass-Laminated Assemblies</b>  Spec. & Dwg. No. (s) <b>10-81001</b> Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number			
<b>2. Schedule Summary</b>			
<b>Task</b>	<b>Reference Doc. No.</b>	<b>Submittal Dates</b> Schedule    Actual	<b>Approval</b> Date      By
Test Plan			
Test Requirements	10-81001	3-22-62	
Test Procedures			
Start Test			
Complete Test			
First Status Report*			
Final Report			
<b>3. Summary of Tests Required</b>			
<u>To Be Performed by Vendor:</u>  1. Optical Inspection 2. Thermal Shock 3. Visible Degradation of Interlayer		<u>By Boeing</u>  1. Emittance Test	
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>			
None			
<b>5. Test Conducted by:</b>			
Organization	Vendor & Boeing 2-5000	Location	Vendor's Plant and Boeing
<b>6. Required Test Witnesses</b>			
Organization	Ingr. 2-6000		
<b>7. Remarks</b>			
Emittance Test Specimens shall be supplied to Boeing by 7-20-62. These samples will be tested by Boeing and the results furnished to Vendor for incorporation into final report.			
Date 12-27-61			
1-15-62 *submitted monthly thereafter 2-6181-0-5	<b>15</b>	D2-5697-16 Vol. IV	Page 14

1.1.1.7

## QUALIFICATION TEST PLAN

Program Element No.

Brief No.

## 1. Item Tested

Windshield Glass-Fused Silica

Spec. &amp; Dwg. No. (s) 10-81001

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-81001	3-23-62			
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

## 3. Summary of Tests Required

To Be Performed by Vendor

1. Optical Inspection
2. Degradation of Glass Coating
3. Thermal Shock

By Boeing

1. Emittance Test

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

None

5. Test Conducted by: Vendor &  
Organization Boeing 2-5000

Location Vendors Plant &amp; Boeing

6. Required Test Witnesses  
Organization Engr. 2-6000

## 7. Remarks

Emittance Test Specimens shall be supplied to Boeing 9-21-62. These samples will be tested by Boeing and the results furnished to Vendor for incorporation into final report.

Date 10-27-61

1-15-62

\*submitted monthly thereafter  
2-6191-0-5

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Vol. IV

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Program Element No.

1.1.1.8

Draw. No.

1

Item Tested: Equipment Component

The design requirements of the equipment component will be proven by structural verification tests covered by D2-5197-15, Vol. VI, Development Test Plan - Design Integration.

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U3-4071-1800

15 1-15-62

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DESIGN

NO. IC-5601-1, Vol. 1

PAGE 1

→



Program Element No.

Brief No.

1.1.1.6

2

Item Tested: Pilot's Component

The design requirements of pilot's component will be proven by structural verification tests covered by D2-5691-16, Vol. VI, Development Test Plan - Design Information.

Program Element No.

Index No.

1.1.1.9

1

Item Tested: Pilot's Seats

The design requirements of V-1244 seats will be proven by structural verification tests covered by 1-5-57-10, Vol. VI, Development Test Plan - Design Integration. 17

1.1.1.11	QUALIFICATION TEST PLAN		Brief No.	
Program Element No.				
1. Item Tested Main Landing Gear Assembly **				
Spec. & Dwg. No. (s)				
Used-On Dwg. No.				
Supplier Boeing				
Supplier's Address Seattle, Washington				
Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submittal Dates		Approval
		Schedule	Actual	Date By
Test Plan	D2-5597-16, Vol. IV		2-5-62	
Test Requirements		3-1-62		
Test Procedures		6-1-62		
Start Test		2-1-63		
Complete Test		2-1-63		
First Status Report*		4-1-63		
Final Report		7-1-63		
3. Summary of Tests Required				
*** (1) Drop Test - To verify the structural adequacy of the main landing gear under simulated operating loads.				
(2) Life Cycling - Run the gear assembly through a number of simulated loading, and operating cycles.				
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)				
*** This test will be conducted on Wkman Air Force Base test sled.				
5. Test Conducted by:				
Organization: Boeing Engineering Laboratories Location: Seattle				
6. Required Test Witnesses				
Organization: Mechanisms and Pneumatics Group and Structures Technology				
7. Remarks				
* The Main Landing Gear Assembly will include the Gear Assembly, Main Gear Door operating mechanism, and Gear Extension system. Fatigue and Static tests will be the responsibility of Structures Technology with support from the Mechanisms and Pneumatics Group.				
Date 1-5-62				
1-15-62	20		D2-5597-16	Page 19
2-0101-0-5	submitted monthly thereafter		Vol. IV	

1.1.1.11

## QUALIFICATION TEST PLAN

2

Program Element No.

Brief No.

## 1. Item Tested

Main Landing Gear Bungee Strap

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier The Boeing Company

Supplier's Address Seattle, Washington

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submission Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	D2-5697-16, Vol. IV		1-5-62		
Test Requirements		11-20-62			
Test Procedures		11-15-62			
Start Test		1-15-62			
Complete Test		1-15-62			
First Status Report		2-15-62			
Final Report		2-15-62			

## 3. Summary of Tests Required

Energy absorption tests at various strain rates and temperatures to qualify the bungee.

## 4. Special Facilities and/or Test Equipment (include Estimated Lead Time)

High strain rate tensile test machine.

## 5. Test Conducted by:

Organization

Boeing Engineering Laboratories

Location

Seattle

## 6. Required Test Witnesses

Organization

Mechanisms and Pneumatics Group and Structures Technology

## 7. Remarks

Date 1-5-62

1-15-62

Submitted monthly thereafter

2-6-62-0-5

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Vol. IV

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1.1.1.11	<b>QUALIFICATION TEST PLAN</b>		3																																																				
Program Element No.			Brief No.																																																				
<b>1. Item Tested</b> <div style="margin-left: 40px;"> Main Landing Gear Energy Strap  Spec. &amp; Dwg. No. (s)  Used-On Dwg. No.  Supplier The Boeing Company  Supplier's Address Seattle, Washington  Supplier's Part Number </div>																																																							
<b>2. Schedule Summary</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <th rowspan="2" style="width: 25%;">Task</th> <th rowspan="2" style="width: 20%;">Reference Doc. No.</th> <th colspan="2" style="width: 20%;">Submittal Dates</th> <th colspan="2" style="width: 15%;">Approval</th> </tr> <tr> <th style="width: 10%;">Schedule</th> <th style="width: 10%;">Actual</th> <th style="width: 10%;">Date</th> <th style="width: 5%;">By</th> </tr> <tr> <td>Test Plan</td> <td>D2-5697-16, Vol. IV</td> <td></td> <td>1-5-62</td> <td></td> <td></td> </tr> <tr> <td>Test Requirements</td> <td></td> <td>7-15-62</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Test Procedures</td> <td></td> <td>11-15-62</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Start Test</td> <td style="background-color: #cccccc;"></td> <td>1-15-63</td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>Complete Test</td> <td style="background-color: #cccccc;"></td> <td>2-15-63</td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>First Status Report*</td> <td></td> <td>2-15-63</td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>Final Report</td> <td></td> <td>3-15-63</td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> </table>				Task	Reference Doc. No.	Submittal Dates		Approval		Schedule	Actual	Date	By	Test Plan	D2-5697-16, Vol. IV		1-5-62			Test Requirements		7-15-62				Test Procedures		11-15-62				Start Test		1-15-63				Complete Test		2-15-63				First Status Report*		2-15-63				Final Report		3-15-63			
Task	Reference Doc. No.	Submittal Dates				Approval																																																	
		Schedule	Actual	Date	By																																																		
Test Plan	D2-5697-16, Vol. IV		1-5-62																																																				
Test Requirements		7-15-62																																																					
Test Procedures		11-15-62																																																					
Start Test		1-15-63																																																					
Complete Test		2-15-63																																																					
First Status Report*		2-15-63																																																					
Final Report		3-15-63																																																					
<b>3. Summary of Tests Required</b>  Energy absorption tests at various strain rates and temperatures to qualify the energy strap as a landing shock absorber.																																																							
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>  High strain rate tensile test machine with heating facilities. The same equipment used for energy strap development, with modifications, may be used for qualification.																																																							
<b>5. Test Conducted by:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> Organization Boeing Engineering Laboratories </div> <div style="width: 35%;"> Location Seattle </div> </div>																																																							
<b>6. Required Test Witnesses</b> Organization Mechanisms and Pneumatics Group and Structures Technology																																																							
<b>7. Remarks</b>																																																							
Date 1-5-62																																																							

1-15-62

\*submitted monthly thereafter  
2-6/81-0-5

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1.1.1.11

## QUALIFICATION TEST PLAN

Program Element No.

Brief No.

## 1. Item Tested

Main Landing Gear Skid

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements					
Test Procedures		7-23-62			
Start Test		8-23-62			
Complete Test		10-23-62			
First Status Report*		11-23-62			
Final Report		11-23-62			
		12-24-62			

## 3. Summary of Tests Required

Vendor qualification tests to verify that the skid meets specifications. Some of the tests will be impact, wear resistance, shear, coefficient of friction and environmental.

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Vendor facilities and test equipment.

## 5. Test Conducted by:

Organization

Location

## 6. Required Test Witnesses

Organization

Mechanisms and Pneumatics Group and Structures Technology

## 7. Remarks

Date 1-5-62

1-15-62

\*submitted monthly thereafter  
2-6101-0-3

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1.1.1.11 Program Element No.	<b>QUALIFICATION TEST PLAN</b>				Brief No.
1. Item Tested <div style="text-align: right; margin-right: 50px;">Nose Landing Gear Assembly **</div> Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier: Boeing Company Supplier's Address: S. 101, Washington Supplier's Part Number 1-5-62 Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	D2-5697-16, Vol. IV		1-5-62		
Test Requirements		2-1-62			
Test Procedures		6-1-62			
Start Test		4-1-63			
Complete Test		6-1-63			
First Status Report*		5-1-63			
Final Report		7-1-63			
3. Summary of Tests Required <div style="margin-top: 10px;">           *** (1) Drop Test - To verify the structural adequacy of the landing gear under simulated operating loads.             (2) Life Cycling - Run the nose gear assembly through a number of simulated heating, loading, and operating cycles.         </div>					
4. Special Facilities and/or Test Equipment (include Estimated Lead Time) <div style="margin-top: 10px;">           *** This test will be conducted on the Holloman Air Force Base test sled.         </div>					
5. Test Conducted by: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>Organization Boeing Engineering Laboratories</div> <div>Location Seattle</div> </div>					
6. Required Test Witnesses <div style="margin-top: 5px;">           Organization Mechanisms and Pneumatics Group and Structures Technology         </div>					
7. Remarks <div style="margin-top: 10px;">           ** Nose Landing Gear Assembly will include the gear assembly, nose gear door operating mechanism, and the nose gear extension system. Fatigue and Static tests will be the responsibility of Structures Technology with support from the Mechanisms and Pneumatics Group.         </div>					
		Date 1-5-62			
1-15-62 *submitted monthly thereafter 2-6-63-0-5		<b>24</b>		D2-5697-16 Vol. IV	Page 2



1.1.1.11 Program Element No.	<b>QUALIFICATION TEST PLAN</b>	Brief No.
1. Item Tested <div style="text-align: right; margin-right: 20px;">Nose Landing Gear Bungee Strap</div> Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier                      The Boeing Company Supplier's Address Seattle, Washington Supplier's Part Number		
2. Schedule Summary		
Task	Reference Doc. No.	Submittal Dates Schedule    Actual
Test Plan	D2-5697-16, Vol. IV	Date                      By 1-5-62
Test Requirements		8-22-62
Test Procedures		12-20-62
Start Test		2-20-63
Complete Test		3-20-63
First Status Report*		3-20-63
Final Report		2-20-63
3. Summary of Tests Required  Energy absorption tests at various strain rates and temperatures to qualify the bungee.		
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time) High strain rate tensile test machine.		
5. Test Conducted by: <div style="display: flex; justify-content: space-between;"> <div>             Organization              Boeing Engineering Laboratories           </div> <div>             Location              Seattle           </div> </div>		
6. Required Test Witnesses Organization Mechanisms and Pneumatics Group and Structures Technology		
7. Remarks		
Date 1-5-62		
1-15-62 *submitted monthly thereafter 2-6/61-0-5	25	D2-5697-16 Vol. IV Page 2.1



1.1.1.11

## QUALIFICATION TEST PLAN

Program Element No.

Brief No:

## 1. Item Tested

Nose Landing Gear Energy Strap

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier The Boeing Company

Supplier's Address Seattle, Washington

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	D2-5697-16, Vol. IV		1-5-62		
Test Requirements		7-15-62			
Test Procedures		12-21-62			
Start Test		2-21-63			
Complete Test		3-21-63			
First Status Report*		3-21-63			
Final Report		4-21-63			

## 3. Summary of Tests Required

Energy absorption tests at various strain rates and temperatures to qualify the energy strap as a landing shock absorber.

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

High strain rate tensile test machine with heating facilities. The same equipment used for energy strap development, with modifications, may be used for qualification.

## 5. Test Conducted by:

Organization

Location

Boeing Engineering Laboratories

Seattle

## 6. Required Test Witnesses

Organization

Mechanisms and Pneumatics Group and Structures Technology

## 7. Remarks

Date 1-5-62

1-15-62

\*submitted monthly thereafter

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1.1.1.11

## QUALIFICATION TEST PLAN

Program Element No.

Brief No.

1. Item Tested

Nose Landing Gear Skid

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements					
Test Procedures		9-11-62			
Start Test		10-11-62			
Complete Test		12-11-62			
First Status Report*		1-11-63			
Final Report		1-11-63			
		2-11-63			

3. Summary of Tests Required

Vendor qualification tests to verify that the skid meets specifications. Some of the tests will be impact, wear resistance, shear, coefficient of friction, and environmental.

4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Vendor facilities and test equipment

5. Test Conducted by:  
Organization

Location

6. Required Test Witnesses  
Organization

Mechanisms and Pneumatics Group and Structures Technology

7. Remarks

Date 1-5-62

1-15-62

\*Submitted monthly thereafter  
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1. 1. 1. 1. 1.		QUALIFICATION TEST PLAN		Brief No.	
Program Element No.					
1. Item Tested					
Umbilical Door Mechanisms - Electrical and Cryogenic					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier Boeing					
Supplier's Address Seattle, Washington					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements					
Test Procedures					
Start Test					
Complete Test		1-15-62			
First Status Report*					
Final Report					
3. Summary of Tests Required					
<p>Qualify the latching and locking mechanisms in the electrical and cryogenic umbilical doors on the glider by the following tests:</p> <p>(1) Life cycling tests under simulated environmental conditions.</p> <p>(2) Static Tests (load to failure).</p>					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
None					
5. Test Conducted by:					
Organization			Location		
Engineering Labs			Seattle		
6. Required Test Witnesses					
Organization					
Mechanisms Group					
7. Remarks					
Date 12-15-61					
1-15-62		28		D2-5697-16	
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PROPULSION & ORDNANCE

1.1.2.1		QUALIFICATION TEST PLAN *		1	
Program Element No.				Brief No.	
1. Item Tested ACCELERATION ROCKET MOTOR (XLR-92)					
Spec. & Dwg. No. (s)		25-80291			
Used-On Dwg. No.		D2-8157-0, and -1			
Supplier		25-80249			
Supplier's Address		Elkton Division, Thiokol Chemical Corporation			
Supplier's Part Number		Elkton, Maryland			
		TE-400			
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	DE-025, Vol. I (Preliminary)	8-20-61	8-30-61		
Test Requirements		5-20-62			
Test Procedures		6-20-62			
Start Test		10-15-62			
Complete Test		4-15-63			
First Status Report*		11-15-62			
Final Report		6-1-63			
3. Summary of Tests Required					
(See Page 28.1)					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
(Rocket subcontractor furnished)					
5. Test Conducted by:		Elkton Division			
Organization		Thiokol Chemical Corp. Location Elkton, Maryland			
6. Required Test Witnesses		The Boeing Company			
Organization		(Q.C. and possibly Propulsion and Ordnance Group 2-6134-4)			
7. Remarks					
*In accordance with the Dyna-Soar R&D policies, the above "Qualification Test" is conducted as a "Preliminary Flight Rating Test (PFR)",. These tests are generally in accordance with MIL-R-25535A, as modified by Boeing Document D2-8157-1, "Design Procurement Specification-Acceleration Rocket Motor."					
Date 12-20-61					
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*submitted monthly thereafter				Vol. IV	
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3. Summary of Tests Required				ACCELERATION ROCKET MOTOR (C-92)				QUALIFICATION TEST PLAN		1.1.2.1		
No. of Motors		Pre-Test Env. Conditioning		Test Firing Environment			Alt. Simulation		Grain Temp. Gradient Control		Test Objectives	
		1		Motor Temp.			3					
				Low			Normal					
3	None	x									Determine Ballistic Performance	
3	None		x								Determine Ballistic Performance	
3	None						x				Determine Ballistic Performance	
3	x	x									Evaluate thrust vector control.	
1	x						x				"	
3	x		x								"	
1	x	x									Determine Ballistic Performance	
1	x		x								Determine Ballistic Performance	
1	x						x				Determine Ballistic Performance	
1	x										Evaluate effects of base heating on performance and on propellant and insulation burn.	
2	None	x									Evaluate thrust vector control system performance.	
2	None		x								Evaluate thrust vector control system performance.	
2	None		x								Evaluate altitude performance, base heating insulation effectiveness, altitude ignition characteristics, and exhaust gas recirculation characteristics.	
1	None	x									Evaluate altitude performance, base heating insulation effectiveness, altitude ignition characteristics, and exhaust gas recirculation characteristics.	
<div>123</div> <p>Includes Temperature Cycling, Vibration, Drop, Humidity and Altitude Conditioning prior to firing. Components only will be subjected to Salt Spray, Seal and Part. Propellant grain temperature-controlled to obtain minimum to max. gradient across the grain. These firings to be conducted in an altitude chamber (Arnold Center, Tullahoma, Tenn.).</p>												

U1491-1003

1-15-62

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ENGINEERING

NO. 22-5697-15, 101. 1

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1.1.2.2		QUALIFICATION TEST PLAN		Brief No.	
Program Element No.					
1. Item Tested HATCH EJECTION SUBSYSTEM					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		5-15-62	5-31-61		
Test Requirements		6-15-62			
Test Procedures		8-15-62			
Start Test		10-15-62			
Complete Test		1-15-63			
First Status Report*		2-15-63			
Final Report		5-20-63			
3. Summary of Tests Required					
To qualify the components of the hatch ejection subsystem (release device, thrusters, initiators, ejection system controls etc.) as a subsystem in conjunction with the hatch assembly and ejection seat subsystem.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization Boeing		Location EAF B - (Sled Tests)			
6. Required Test Witnesses					
Organization Propulsion and Ordnance Group		2-6134-4			
7. Remarks					
The complete escape system (ejection seat, hatch, initiators, thrusters, release devices, ejection system, (controls, except pilot's control and external control, etc.) will be qualified as a system during the Dyna-Soar escape system sled tests which are slated to begin at EAFB approximately December 15, 1962 and will terminate approximately May 20, 1963.					
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*submitted monthly thereafter				Vol. IV	
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1.1.1.2.2		QUALIFICATION TEST PLAN		Brief No.	
Program Element No.					
1. Item Tested		HATCH JETTISON SUBSYSTEM (ZERO SPEED)			
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates Schedule / Actual		Approval Date / By	
Test Plan		5-15-62			
Test Requirements		4-15-62			
Test Procedures		6-15-62			
Start Test		11-15-62			
Complete Test		11-30-62			
First Status Report*		11-30-62			
Final Report		12-30-62			
3. Summary of Tests Required					
Zero speed hatch jettison tests using each of the (3) three jettison modes (pilot's, emergency and external). Operational suitability type testing. Trajectory data to be obtained.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
None Required					
5. Test Conducted by:					
Organization		Boeing		Location Seattle (Can Bute)	
6. Required Test Witnesses					
Organization		Engineering			
7. Remarks					
Date 12-21-61					
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*submitted monthly thereafter				Vol. IV	
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1.1.2.2		QUALIFICATION TEST PLAN		Brief No.	
Program Element No.					
1. Item Tested		Pilot's Hatch Fastener Assembly			
Spec. & Dwg. No. (s)		10-81040-5			
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		6-5-62			
Test Requirements	10-81040-5	3-21-62	*		
Test Procedures		7-21-62			
Start Test		8-21-62			
Complete Test		11-21-62			
First Status Report*		10-21-62			
Final Report		12-21-62			
3. Summary of Tests Required					
Performance Tests					
Environmental Tests					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Vendor facilities					
5. Test Conducted by:					
Organization	Vendor	Location			
6. Required Test Witnesses					
Organization	Engineering				
7. Remarks					
*Source control drawing release date.					
Date 12-21-61					
1-15-62		Submitted monthly thereafter		33	
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1.1.2.2		QUALIFICATION TEST PLAN		4	
Program Element No.				Brief No.	
1. Item Tested <b>Pilot's Hatch Ejection Thruster</b>					
Spec. & Dwg. No. (s) 10- -1					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		6-5-62			
Test Requirements		3-21-62*			
Test Procedures		7-21-62			
Start Test		9-21-62			
Complete Test		11-21-62			
First Status Report*		10-21-62			
Final Report		12-21-62			
3. Summary of Tests Required					
Performance Tests Environmental Tests					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Vendor facilities					
5. Test Conducted by:					
Organization	Vendor	Location			
6. Required Test Witnesses					
Organization	Engineering				
7. Remarks					
* Source control drawing release dates					
Date 12-21-61					
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1.1.2.2		QUALIFICATION TEST PLAN		6	
Program Element No.					Brief No.
1. Item Tested					
Propellant Actuated Device - Controls Spec. & Dwg. No. (s) 10- Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submital Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		2-1-62			
Test Requirements	10-	10-1-61			
Test Procedures		3-1-62			
Start Test		5-1-62			
Complete Test		10-1-62			
First Status Report		6-1-62			
Final Report		8-1-62			
3. Summary of Tests Required					
Performance Tests Environmental Tests					
<p> <i>NOTED - Controls for propellant actuated devices will be qualified (as required) with the systems they control such as in the window heat shield jettison and hatch ejection subsystems. There will be no qualification of these controls as subsystems in themselves (per mechanical and electrical and propulsion and guidance design groups).</i> </p>					
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)					
Vendor facilities					
5. Test Conducted by: Vendor					
Organization			Location		
6. Required Test Witnesses					
Organization Engineering					
7. Remarks					
This item includes the internal controls for both the window heat shield jettison and hatch ejection subsystems • Source control drawing release data					
Data 1-1-62					

Pneumatics

1.1.2.5		QUALIFICATION TEST PLAN		Brief No.	
Program Element No.					
1. Item Tested		Glider Destruct System			
Spec. No.					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates Schedule Actual	Approval Date by		
Test Plan		9-9-62			
Test Requirements	100	9-15-62			
Test Procedures		10-11-62			
Start Test		1-21-63			
Complete Test		2-21-63			
Final Status Report		2-21-63			
Final Report		4-21-63			
3. Summary of Tests Required					
Performance Tests					
Environmental Tests					
Total system will be qualified by vendor but components (safe/arm device, detonators, explosive charges) will also be qualified.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Vendor Facilities					
5. Test Conducted by:					
Organization	Vendor	Location			
6. Required Test Witnesses:					
Organization	Engineering				
7. Remarks					
* Source Control Drawing Release Date					
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Date

12-21-62

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1.1.3.1		QUALIFICATION TEST PLAN		1	
Program Element No.		Brief No.			
1. Item Tested Accessory Power Unit					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier Sundstrand Aviation - Denver, Division of Sundstrand Corp.					
Supplier's Address Denver, Colorado					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-20912, Rev. E	2-7-62			
Test Procedures		9-1-62			
Start Test		11-1-62			
Complete Test		7-1-63			
First Status Report*					
Final Report					
3. Summary of Tests Required					
<p>The accessory power unit shall be tested to demonstrate its capability to operate throughout the flight mission while subjected to the environmental conditions encountered during the Dyna-Soar flight mission, and to maintain performance within specification limits.</p> <p>The following Qualification Tests will be performed in accordance with the requirements of Source Control Drawing 10-20912: Functional, Attitude, Acceleration, Vibration, Speed Regulation, Horsepower Rating, High Temperature, Low Temperature, Humidity, Safety Limits, Life, Shock, Self-Containment.</p>					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Vendor's Test Facilities					
5. Test Conducted by: Sundstrand Aviation					
Organization		Location Denver, Colorado			
6. Required Test Witnesses					
Organization		The Boeing Company 2-6135-1			
7. Remarks					
Date 1-8-62					
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1.1.3.1

## QUALIFICATION TEST PLAN

2

Program Element No.

Brief No.

## 1. Item Tested

Exhaust Duct - Accessory Power Unit

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	by
Test Plan					
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

## 3. Summary of Tests Required

The exhaust duct shall be mounted on the accessory power unit while qualification tests are performed on the accessory power unit per Source Control Drawing 10-20912, plus supplemental tests conducted at Boeing.

Vibration testing on the exhaust duct shall be done in two parts. One part shall be done by the APU vendor and shall consist of inducing vibrations on the exhaust duct as seen by the APU. The other test shall be done by Boeing and shall consist of inducing vibrations on the exhaust duct as seen by the glider basic structure which are different from the APU vibration environment.

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Vendor's Test Facilities

## 5. Test Conducted by:

Organization Sundstrand Aviation

Location Denver, Colorado

## 6. Required Test Witnesses

Organization 2-6135-1

## 7. Remarks

Date

1-8-62

1-15-62

\*submitted monthly thereafter  
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ACCESSORY POWER

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1.1.3.2

## QUALIFICATION TEST PLAN

Program Element No.

Brief No.

## 1. Item Tested

Electrical System

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier Boeing

Supplier's Address

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	This sheet				
Test Requirements		12-1-62			
Test Procedures					
Start Test		9-1-62			
Complete Test		6-1-63			
First Status Report*		10-1-62			
Final Report		7-1-63			

## 3. Summary of Tests Required

The electrical system will be tested for functional compatibility, sequential operation and protective coordination for normal and abnormal operating conditions. The mockup will be tested under laboratory ambient environmental conditions.

Where applicable data resulting from the tests described in Section 1.1.3.2 of the design development test document D2-5697-16, Vol. II may be used to prove qualification of the electrical system will also be performed in the environmental simulator as part of the integrated environmental control/secondary power subsystem. (Reference document D2-7924 Section 1.1.10.6)

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

5. Test Conducted by: Boeing  
Organization

Location Seattle, Washington

## 6. Required Test Witnesses

Organization Electrical Systems Unit 2-6136

## 7. Remarks

The electrical system will be simulated as closely as possible to the actual glider distribution component using actual wire length and size, qualified component parts and qualified protective devices where possible. The simulated distribution component (mockup) will be built at Boeing laboratories and maintained (updated) to the latest level of component part design changes.

Date 12-1-62

Date 12-1-62

1-15-62

\* Reprinted monthly thereafter

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1.1.3.2

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ELEC. IIR.

Program Element No.		QUALIFICATION TEST PLAN		Brief No.	
1. Item Tested					
AC Generator and Controls					
Spec. & Dwg. No. (s) 10-20902-1 through -6					
Used-On Dwg. No.					
Supplier Westinghouse					
Supplier's Address Lima, Ohio					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-20902			12-12-61	W. J. Anderson
Test Procedures		2-2-62			
Start Test		7-1-62			
Complete Test		3-1-63			
First Status Report		6-1-63			
Final Report		4-1-64			
3. Summary of Tests Required The Generator and Controls Unit consists of the following:					
10-20902-1 Generator Assembly		10-20902-6 Circuit Breaker Assembly			
10-20902-2 Voltage Regulator Assembly					
10-20902-3 Control Panel Assembly					
10-20902-4 Deleted					
10-20902-5 Current Transformer Assembly					
The generator and controls unit will be qualification tested for the following:					
Dielectric					
Performance					
Environment		Cooling			
Regulator constants		Life			
Where applicable, data resulting from the tests described in section 1.1.3.2 of the Design Development Test Document D2-5697-16 Vol. II and section 1.1.10.6 of the Design Integration Test Requirements Document D2-7924 may be used to prove qualification of the generator and controls unit.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Unknown at this date					
5. Test Conducted by: Westinghouse					
Organization		Location Lima, Ohio & Denver, Colorado			
6. Required Test Witnesses					
Organization		A qualified Boeing engineer for specific tests, but not all tests. Other witnesses may be required.			
7. Remarks					
Selected portions of the qualification of this hardware will be performed jointly with the AFU at Sundstrand plant in Denver, Colorado.					
1-13-62		Date		12-29-61	
Submitted monthly thereafter		40		D2-5697-16 Vol. IV	
2-61-0-5				Page 33	

1.1.3.2		QUALIFICATION TEST PLAN				3	
Program Element No.		Brief No.					
1. Item Tested Subsystem Electrical Relay Panel							
Spec. & Dwg. No. (s)							
Used-On Dwg. No.							
Supplier Boeing							
Supplier's Address Seattle							
Supplier's Part Number							
2. Schedule Summary							
Task	Reference Doc. No.	Submittal Dates		Approval			
		Schedule	Actual	Date	By		
Test Plan							
Test Requirements		6-1-62					
Test Procedures							
Start Test		8-1-62					
Complete Test		11-1-62					
First Status Report*		9-1-62					
Final Report		12-1-62					
3. Summary of Tests Required							
<p>Subsystem Electrical Relay Panel will be qualification tested per the requirements of (to be determined)</p> <p>A summary of the tests is as follows:</p> <p style="margin-left: 40px;">Environmental</p> <p style="margin-left: 40px;">Performance</p>							
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)							
Unknown at this date							
5. Test Conducted by: Boeing							
Organization				Location Seattle, Wash.			
6. Required Test Witnesses							
Organization							
7. Remarks							
Date 12-28-61							
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WIRING DEV. & DIAG.

1.1.3.2		QUALIFICATION TEST PLAN		4	
Program Element No.		Brief No.			
1. Item Tested      Main Power Box					
Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier    Boeing Supplier's Address    Seattle Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates Schedule    Actual		Approval Date      By	
Test Plan					
Test Requirements					
Test Procedures			6-1-62		
Start Test			8-1-62		
Complete Test			11-1-62		
First Status Report*			6-1-62		
Final Report			12-1-62		
3. Summary of Tests Required					
Main Power Box will be qualification tested per the requirements of (to be determined.)					
A summary of the tests is as follows:					
Environment					
Performance					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Unknown at this time					
5. Test Conducted by: Boeing					
Organization			Location Seattle, Wash.		
6. Required Test Witnesses					
Organization					
7. Remarks					
		Date		12-28-61	
1-15-62		42		D2-5697-16 Vol. IV	
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1.1.3.2		QUALIFICATION TEST PLAN		5	
Program Element No.		Brief No.			
1. Item Tested Forward Load Panels					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements					
Test Procedures		6-1-60			
Start Test		8-1-62			
Complete Test		11-1-62			
First Status Report*		9-1-62			
Final Report		12-1-62			
3. Summary of Tests Required					
Forward Load Panels will be qualification tested per the requirements of (to be determined)					
A summary of the tests is as follows:					
Environmental Performance					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Unknown at this date					
5. Test Conducted by:					
Organization		Boeing		Location Seattle, Wash.	
6. Required Test Witnesses					
Organization					
7. Remarks					
Date 12-28-61					
1-15-62		43		D2-5697-16	
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1.1.3.2

## QUALIFICATION TEST PLAN

6

Program Element No.

Brief No.

1. Item Tested

Spec. & Dwg. No. (s) Transformer-rectifier unit  
10-20903

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements					
Test Procedures	10-20903	9-1-61	9-1-61		
Start Test					
Complete Test					
First Status Report*					
Final Report					

## 3. Summary of Tests Required

The transformer-rectifier unit will be qualification tested per the requirements of the source control drawing 10-20903. A summary of the tests is as follows:

Performance (regulation, ripple, efficiency, power factor, overload, — etc.)  
 Environment (Vibration, temperature, acceleration, drop, — etc.)  
 Dielectric  
 Parallel operation  
 Parameter constants  
 Cooling  
 Life

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Unknown at this date

## 5. Test Conducted by:

Organization

Location

Supplier

## 6. Required Test Witnesses

Organization

## 7. Remarks



Vendor selection anticipated by 2-1-62.

Date

12-28-61

1-15-62

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1.1.3.2 Program Element No.		<b>QUALIFICATION TEST PLAN</b>			Brief No.	
1. Item Tested      Umbilical Disconnect Relay Panel Motor Oper. SW.						
Spec. & Dwg. No. (s)    10-81116 Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date      By		
Test Plan						
Test Requirements	10-81116	4-19-62				
Test Procedures						
Start Test						
Complete Test						
First Status Report						
Final Report						
3. Summary of Tests Required  Umbilical Disconnect Relay Panel will be qualification tested per the requirements of (To be Determined) A summary of the tests is as follows: Environmental Performance						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)  Unknown at this date						
5. Test Conducted by: Organization                      Supplier                      Location						
6. Required Test Witnesses Organization						
7. Remarks Vendor selection anticipated by 5-15-62.						
		Date		12-28-61		
1-15-62 Submitted monthly thereafter 2-6101-0-5		<b>45</b>		D2-5697-16 Vol. IV		Page 43

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1.1.3.2

## QUALIFICATION TEST PLAN

Program Element No.

Brief No.

1. Item Tested Circuit Protective Devices

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

DEFINED - To be qualified to standards and included in MIL Standards Book 31 by Physics Technology Ref-Record Sheet AL-11-102, dated Dec. 8, 1951.

2. Schedule Summary

Task	Reference Doc. No.	Submitted Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report					
Final Report					

3. Summary of Tests Required

Circuit Protective Devices will be qualification tested per the requirements of (to be determined)

A summary of the test is as follows:

Performance (time-current characteristic, overload, interrupting capacity, etc.)

Environment (vibration, temperature, shock, pressure, acceleration, etc.)

Dielectric

4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

5. Test Conducted by:

Organization

Location

Supplier

6. Required Test Witnesses

Organization

7. Remarks

Date 8-11-51

1-1-52

Submitted monthly thereafter

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1.1.3.2

## QUALIFICATION TEST PLAN

Program Element No.

Brief No.

1. Item Tested

Compartment Penetrations

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

## 3. Summary of Tests Required

Compartment Penetrations will be qualification tested per the requirements of (To be determined)

A summary of the tests is as follows:

Environment

Performance

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Unknown at this date

## 5. Test Conducted by:

Boeing

Organization

Location Seattle, Washington

## 6. Required Test Witnesses

Organization

## 7. Remarks

Date

12-29-61

1-15-62

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1.1.3.2

## QUALIFICATION TEST PLAN

10

Program Element No.

Brief No.

1. Item Tested

Blocking Diode Assembly

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier

Boeing

Supplier's Address

Seattle

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements					
Test Procedures		7-1-61			
Start Test		7-1-61			
Complete Test		7-1-61			
First Status Report		11-1-61			
Final Report		12-1-61			

3. Summary of Tests Required

Will be inserted when available

4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Unknown at this date

5. Test Conducted by:

Organization

Location

Supplier

6. Required Test Witnesses:

Organization

7. Remarks

1

Date

12-22-61

1-12-62

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WIRING DEV. & DIAG.

<b>1.1.3.2</b> Program Element No.	<b>QUALIFICATION TEST PLAN</b>	11 Brief No.																																																				
<b>1. Item Tested</b> <div style="text-align: right; margin-right: 50px;">High Temperature wire</div> Spec. & Dwg. No. (s) 10-01005 Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number																																																						
<b>2. Schedule Summary</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th rowspan="2">Task</th> <th rowspan="2">Reference Doc. No.</th> <th colspan="2">Submitted Dates</th> <th colspan="2">Approval</th> </tr> <tr> <th>Schedule</th> <th>Actual</th> <th>Date</th> <th>By</th> </tr> </thead> <tbody> <tr> <td>Test Plan</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Test Requirements</td> <td>10-01005</td> <td>10-1-61</td> <td>11-1-61</td> <td></td> <td></td> </tr> <tr> <td>Test Procedures</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Start Test</td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> </tr> <tr> <td>Complete Test</td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> </tr> <tr> <td>First Status Report*</td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> </tr> <tr> <td>Final Report</td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> </tr> </tbody> </table>			Task	Reference Doc. No.	Submitted Dates		Approval		Schedule	Actual	Date	By	Test Plan						Test Requirements	10-01005	10-1-61	11-1-61			Test Procedures						Start Test						Complete Test						First Status Report*						Final Report					
Task	Reference Doc. No.	Submitted Dates			Approval																																																	
		Schedule	Actual	Date	By																																																	
Test Plan																																																						
Test Requirements	10-01005	10-1-61	11-1-61																																																			
Test Procedures																																																						
Start Test																																																						
Complete Test																																																						
First Status Report*																																																						
Final Report																																																						
<b>3. Summary of Tests Required</b> <div style="margin-top: 10px;"> <p>Samples of high temperature wire will be exposed to the following tests:</p> <table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;">           Temperature            Thermocouple Response            Vibration            Hardness of Sheath            Sheath Internal Defects            Mechanical Strength of Insulation            X-Ray Inspection            Insulation Resistance         </td> <td style="width: 50%; vertical-align: top;">           Dielectric Withstanding Voltage            Conductor Resistance            Conductor Continuity            Bend Tests            Metallurgical Structure            Surface Defects         </td> </tr> </table> </div>			Temperature Thermocouple Response Vibration Hardness of Sheath Sheath Internal Defects Mechanical Strength of Insulation X-Ray Inspection Insulation Resistance	Dielectric Withstanding Voltage Conductor Resistance Conductor Continuity Bend Tests Metallurgical Structure Surface Defects																																																		
Temperature Thermocouple Response Vibration Hardness of Sheath Sheath Internal Defects Mechanical Strength of Insulation X-Ray Inspection Insulation Resistance	Dielectric Withstanding Voltage Conductor Resistance Conductor Continuity Bend Tests Metallurgical Structure Surface Defects																																																					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b> Unknown at this date																																																						
<b>5. Test Conducted by:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Organization</td> <td style="width: 50%;">Location</td> </tr> <tr> <td>Supplier</td> <td></td> </tr> </table>			Organization	Location	Supplier																																																	
Organization	Location																																																					
Supplier																																																						
<b>6. Required Test Witnesses</b> Organization																																																						
<b>7. Remarks</b> <div style="margin-top: 10px;">  Vendor selection anticipated by 3-1-62.         </div>																																																						
Date 12-28-61																																																						
41 1-15-62 Submitted monthly thereafter 2-6/61-3-5	<b>49</b>	D2-5697-16 Vol. IV Page 47																																																				





WILKINS DSW. & DICO.

1.1,3,2 Program Element No.	<b>QUALIFICATION TEST PLAN</b>	22 Brief No.
1. Item Tested <span style="float: right;">Relays</span>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">           Spec. &amp; Dwg. No. (s)            Used-On Dwg. No.            Supplier            Supplier's Address            Supplier's Part Number         </div> <div style="width: 50%;">           DERIVED - To be qualified on standards and included in MIL Standards Book 31 by Physics Technology (Ref. Coord Sheet EL-1112, dated December 8, 1961).         </div> </div>		
2. Schedule Summary		
Task	Reference Doc. No.	Submittal Dates Schedule Actual
Test Plan		Approval Date By
Test Requirements		
Test Procedures		
Start Test		
Complete Test		
First Status Report		
Final Report		
3. Summary of Tests Required  Tests required for relays will be qualification tested per the requirements of (To be determined) A summary of the tests is as follows: <div style="margin-left: 40px;">           Performance (Pickup and dropout voltage, contact bounce, operating and release time, corona, etc.)            Environment (Vibration, temperature, acceleration, altitude, shock, etc.)            Life            Dielectrics         </div>		
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)		
5. Test Conducted by: <div style="display: flex; justify-content: space-between;"> <div style="width: 50%;">           Organization             Supplier         </div> <div style="width: 50%;">           Location         </div> </div>		
6. Required Test Witnesses Organization		
7. Remarks		
Date 8-11-61		
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<b>1.1.3.2</b> Program Element No.	<b>QUALIFICATION TEST PLAN</b>		13 Brief No.	
<b>1. Item Tested</b> Umbilical and test plug connectors  Spec. & Dwg. No. (s) 10-61010 Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number				
<b>2. Schedule Summary</b>				
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By
Test Plan				
Test Requirements	10-61010	9-1-61	9-21-61	
Test Procedures				
Start Test				
Complete Test				
Final Status Report				
Final Report				
<b>3. Summary of Tests Required</b>  Umbilical and test plug connectors shall be qualification tested per the requirements of 10-61010 A summary of the tests is as follows: Performance Environment Contact Voltage drop Insulation resistance and dielectric Coupling and uncoupling force				
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>  Unknown at this date				
<b>5. Test Conducted by:</b> Organization Supplier Location				
<b>6. Required Test Witnesses</b> Organization				
<b>7. Remarks</b> Vendor selection anticipated by 3-15-62.				
		Date 12-29-61		
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1.1.3.2	QUALIFICATION TEST PLAN				14	
Program Element No.					Brief No.	
1. Item Tested						
Spec. & Dwg. No. <sup>High Temperature connectors</sup> (5) 10-81008 Used-On Dwg. No. Supplier Supplier's Address  Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan						
Test Requirements	10-81008	7-31-61	7-31-61			
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report						
3. Summary of Tests Required						
High temperature connectors will be qualification tested per the requirements of the source control drawing 10-81008. A summary of the tests is as follows:						
1. Visual and dimensional inspection      5. Insulation resistance and dielectric 2. Environmental      6. Corona onset voltage 3. Coupling and uncoupling force      7. Gas leakage 4. Contact voltage drop						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
Unknown at this date.						
5. Test Conducted by:						
Organization				Location		
Supplier						
6. Required Test Witnesses						
Organization						
7. Remarks						
 Vendor selection anticipated by 2-1-62.						
				Date : 12-28-61		
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1.1.3.2		QUALIFICATION TEST PLAN		15	
Program Element No.			Brief No.		
1. Item Tested Batteries - Hatch Jettison					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier 					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements		2-15-62			
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
Batteries will be qualification tested per the requirements of (To be determined)					
The summary of the test is as follows:					
Performance (Electrical - voltage droop)					
Environment					
Dielectric					
Explosion proof					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization			Location		
Supplier					
6. Required Test Witnesses					
Organization					
7. Remarks					
 Vendor selection anticipated by 5-1-62.					
		Date		12-28-61	
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1.1.3.2		QUALIFICATION TEST PLAN		25	
Program Element No.		Brief No.			
1. Item Tested		Transformers			
Spec. & Dwg. No. (s)		DELETED - Transformers are no longer used on the Dync-Boss glider per Coord Sheet DL-W-102, dated Dec. 6, 1961.			
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
The Transformers will be qualification tested per the requirements of (To be determined)					
A summary of the tests are as follows:					
Performance (regulation, efficiency, insulation, etc.)					
Environment (vibration, temperature, shock, etc.)					
Dielectric					
Explosion proof					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Location			
Supplier					
6. Required Test Witnesses					
Organization					
7. Remarks					
Date 8-11-61					
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1.1.3.3 Program Element No.	<b>QUALIFICATION TEST PLAN</b>	1 Brief No.								
1. Item Tested <span style="float: right;">Glider Hydraulic System</span> Spec. & Dwg. No. (s) <span style="float: right;"></span> Used-On Dwg. No. Supplier <span style="float: right;">The Boeing Company</span> Supplier's Address <span style="float: right;">Seattle, Wash.</span> Supplier's Part Number										
2. Schedule Summary										
Task	Reference Doc. No.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Submittal Dates</th> <th colspan="2">Approval</th> </tr> <tr> <th>Schedule</th> <th>Actual</th> <th>Date</th> <th>By</th> </tr> </table>	Submittal Dates		Approval		Schedule	Actual	Date	By
Submittal Dates		Approval								
Schedule	Actual	Date	By							
Test Plan										
Test Requirements										
Test Procedures										
Start Test										
Complete Test										
First Status Report										
Final Report										
3. Summary of Tests Required  <p>The Hydraulic system qualification will be accomplished by a series of independent tests according to briefs given below on parts, assemblies, and the complete system.</p> <p>System Tests - Briefs 22 and 23          Assembly Tests - Briefs 7, 10, 13 and 17          Part Tests - Briefs 8, 9, 11, 12, 14, 15, 16, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29, 30 and 31</p>										
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)  <div style="text-align: center;"></div>										
5. Test Conducted by: <div style="display: flex; justify-content: space-between;"> <div>Organization </div> <div>Location </div> </div>										
6. Required Test Witnesses Organization										
7. Remarks <div style="margin-top: 10px;">  See applicable Qualification Test Plan         </div> <div style="margin-top: 10px;">  The completion of all tests before first glider flight.         </div> <div style="margin-top: 10px;">  Two months after first glider flight.         </div>										
1-15-62 submitted monthly thereafter 2-4-62-0-1		<b>55</b>	D2-5697-16 Vol. IV Page 55							



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1. 3.3		QUALIFICATION TEST PLAN		2	
Program Element No.				Brief No.	
1. Item Tested Acceleration Rocket Hydraulic System 					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task		Reference Doc. No.	Submittal Dates		Approval
			Schedule	Actual	Date By
Test Plan					
Test Requirements			10-31-61		
Test Procedures					
Start Test			3- 4-62		
Complete Test					
First Status Report*			12-31-61		
Final Report					
3. Summary of Tests Required					
a. Performance tests of complete system in the laboratory to determine compliance with performance requirements under simulated load and environment.					
b. Performance tests of complete system on the rocket to determine compliance with performance requirements during static firing.					
c. Endurance tests under ground checkout conditions.					
d. To be performed in conjunction with the Flight Control Operational Mockup Tests.					
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)					
5. Test Conducted by: 2-5354 Organization Mechanical-Propulsion Installation Annex A Acceleration Rocket Vendor (Michael)					
6. Required Test Witnesses 2-6134-1 Organization Dyna-Socor Hydraulics					
7. Remarks					
 This plan is being revised and will be available February 15, 1962.					
1-15-62 *submitted monthly thereafter 2-6134-0-5			Date 8-14-62		D2-5697-16 Vol. IV

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1.1.3.3		QUALIFICATION TEST PLAN		3	
Program Element No.				Brief No.	
1. Item Tested Acceleration Receptor Hydraulic Power Unit 					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submit Dates Schedule Actual		Approval Date By	
Test Plan					
Test Requirements	10-xxxxxx		8-21-61		
Test Procedures					
Start Test			3-1-62		
Complete Test			9-1-62		
First Status Report*					
Final Report					
3. Summary of Tests Required					
a. Performance tests to determine compliance with system requirements.					
b. Filter efficiency and particle size tests.					
c. Proof and Burst Pressure Tests.					
d. Endurance tests under ground and airborne conditions.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Vendor		Location	
6. Required Test Witnesses					
Organization		2-6134-1 Dyna-Seal Hydraulics			
7. Remarks					
 This plan is being revised and will be available February 15, 1962.					
1-15-62		Date 8-24-61			
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1.1.3.3		QUALIFICATION TEST PLAN		Brief No.	
Program Element No.					
1. Item Tested Acceleration Rocket Servo Actuator Package 					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-XXXXXX	8-31-61			
Test Procedures					
Start Test					
Complete Test					
First Status Report					
Final Report					
3. Summary of Tests Required					
a. Functional tests to determine compliance with actuating performance requirements. b. Proof and burst pressure tests c. Endurance tests under simulated conditions of load, temperature and vibration for the acceleration rocket.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Vendor		Location	
6. Required Test Witnesses					
Organization		2-6134-1 Dyna-Sour Hydraulics			
7. Remarks					
 This plan is being revised and will be available February 15, 1962.					
1-15-62		Date 8-24-61			
Submitted monthly thereafter 2-18-62		58		D2-5697-16 Vol. IV	
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1.2.3.3

## QUALIFICATION TEST PLAN

Program Element No.

Brief No.

1. Item Tested

ACCELERATION MOUNT SERVO ACTUATOR

Spec. &amp; Dwg. No. (s) 10-21014

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-21014				
Test Procedures		9-11-61			
Start Test					
Complete Test					
Final Status Report*					
Final Report		9-2-62			

## 3. Summary of Tests Required

The supplier will be required to accomplish the following tests:

1. Performance    2. Vibration    3. Temperature    5. MIL-R-5272C only  
as applicable

Reliability (No test as such. Time and failure records will be made during development and qualification testing.)

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

5. To be Conducted by:  
Organization

Location

6. Required Test Witnesses  
Organization

## 7. Remarks

Preliminary Information



This plan is being revised and will be available February 15, 1962.

Date

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ACCELERATION MOUNT SERVO ACTUATOR

1.3.3.2		QUALIFICATION TEST PLAN		6	
Program Element No.				Brief No.	
<b>1. Item Tested</b> <i>Glider Speed Brake Assembly &amp; Components</i> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> Spec. &amp; Dwg. No. (s)  Used-On Dwg. No.  Supplier  Supplier's Address  Supplier's Part Number </div> <div style="width: 50%;"> <i>The Speed Brake Assembly has been evaluated. Studies have shown that the structure can be used to provide the desired drag characteristics. Ref - Dyna-Sour Bulletin 23-1900-132, dated Dec. 4, 1961.</i> </div> </div>					
<b>2. Schedule Summary</b>					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		1-31-62			
Test Requirements					
Test Procedures					
Start Test		7-27-62			
Complete Test		8-31-62			
First Status Report					
Final Report					
<b>3. Summary of Tests Required</b> <ol style="list-style-type: none"> <li>a. Performance tests to determine compliance with activating requirements and capability of maintaining fluid within design temperatures.</li> <li>b. Overtemperature tests</li> <li>c. Proof and burst pressure tests</li> <li>d. Endurance test under simulated conditions of load, temperature, and vibration for glider.</li> </ol>					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b> Protected test cell with radiant heating and vibration testing equipment. Cell to be capable of being atmospherically controlled to 200,000 feet.      1200					
<b>5. Test Conducted by:</b> 2-5354 <b>Location</b> Organization: Mechanical-Propulsion Laboratory					
<b>6. Required Test Witnesses</b> 2-6134-1 Organization: Dyna-Sour      Qualifies					
<b>7. Remarks</b>					
		Date		8-14-62	
1-15-62 Submitted monthly thereafter 2-6181-0-5		<b>60</b>		D2-5697-16 Vol. IV	

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1.1.3.3		QUALIFICATION TEST PLAN		7	
Program Element No.				Brief No.	
1. Item Tested Glider Acceler Servo Actuator Subsystem					
Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By	
Test Plan	This Sheet	1-15-62	1-10-62		
Test Requirements					
Test Procedures					
Start Test					
Complete Test		7-23-62			
First Status Report*		7-31-62			
Final Report					
3. Summary of Tests Required					
a. Performance tests to determine compliance with actuating requirements and capability of maintaining fluid within design temperatures.					
b. Overtemperature tests					
c. Proof and burst pressure tests					
d. Endurance test under simulated conditions of load temperature, and vibration for glider.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Protected test cell with radiant heating and vibration testing equipment. Cell to be capable of being atmospherically controlled to 200,000 feet. 12%.					
5. Test Conducted by: 2-5334					
Organization		Mechanical-Propulsion Laboratory		Location	
6. Required Test Witnesses: 2-5134-1					
Organization		Dyna-Sear Hydraulics			
7. Remarks					
1-15-62		Date		1-10-62	
submitted monthly thereafter		61		D2-5697-16 Vol. IV	
2-1-61-0-5					

1.1.3.3		QUAL FLIGHT CONTROL TEST PLAN		Brief No.	
Program Element No.					
1. Item Tested <span style="float: right;">Rudder Servo Actuator Subsystem</span>					
Spec. & Dwg. No. (s) 10- 81036					
Used-On Dwg. No. - - - - - Rudder Actuator Assy - Hydraulic					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-81036	2-1-62			
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
Before being accepted by Boeing for use on the higher assembly the supplier will be required to accomplish the following tests:					
1. Performance    2. Vibration    3. Temperature    5. MIL-E-5272C only as applicable					
To be qualified in conjunction with Rudder Servo Actuator Subsystem '1.1.3.3'.. Brief 7, page 59.					
Reliability (no tests as such. Time and failure records will be made during development and qualification testing.)					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization			Location		
6. Required Test Witnesses					
Organization					
7. Remarks:					
Preliminary information					
1-15-62		Date		1-10-62	
2-6101-0-5		62		D2-5697-16 Vol. IV	
submitted monthly thereafter.				Page	

1.1.3.3		<b>QUALIFICATION TEST PLAN</b>		9	
Program Element No.				Brief No.	
<b>1. Item Tested</b> <b>RUDDER HYDRAULIC VALVE ASSEMBLY</b>					
Spec. & Dwg. No. (s)      10-31007 Used-On Dwg. No.      - - - - - Glider Actuator Assy - Hydraulic Supplier Supplier's Address Supplier's Part Number					
<b>2. Schedule Summary</b>					
Task	Reference Doc. No.	Submitted Dates Schedule    Actual		Approval Date      by	
Test Plan					
Test Requirements	10-31007	5-8-62	6-7-62		
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
<b>3. Summary of Tests Required</b>					
Before being accepted by Boeing for use on the higher assembly the supplier will be required to accomplish the following tests:					
1. Performance    2- Vibration    3. Temperature    5. MIL-B-5272C only as applicable					
To be qualified in conjunction with Rudder Servo Actuator Subsystem 1.1.3.3 Brief 7, page 59. Reliability: (no tests as such. Time and failure records will be made during development and qualification testing.)					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>					
<b>5. Test Conducted by:</b>					
Organization			Location		
<b>6. Required Test Witnesses:</b>					
Organization					
<b>7. Remarks:</b>					
Preliminary Information					
		Date		1-10-62	
1-13-62 *submitted monthly thereafter 2-6161-0-3		<b>63</b>		D2-5397-16 Vol. IV	
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1.1.3.3	QUALIFICATION TEST PLAN		10
Program Element No.			Brief No.
1. Item Tested      Glider Eleven Servo Actuator Subsystem			
Spec. & Dwg. No. (s)			
Used-On Dwg. No.			
Supplier			
Supplier's Address			
Supplier's Part Number			
2. Schedule Summary			
Task	Reference Doc. No.	Submittal Dates Schedule / Actual	Approval Date      By
Test Plan	This Sheet	1-12-62 / 1-17-62	
Test Requirements			
Test Procedures			
Start Test		7-2-62	
Complete Test		2-11-63	
First Status Report*			
Final Report			
3. Summary of Tests Required			
a. Performance tests to determine compliance with actuating requirements and capability of maintaining fluid within design temperatures. b. Overtemperature tests c. Proof and burst pressure tests d. Endurance test under simulated conditions of load, temperature, and vibration for glider.			
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)			
Protected test cell with radiant heating and vibration testing equipment. Cell to be capable of being atmospherically controlled to 200,000 ft. 12M.			
5. Test Conducted by: 2-5354			
Organization Mechanical-Propulsion		Location Laboratory	
6. Required Test Witnesses 2-6134-1			
Organization		Dyna-Soar Hydraulics	
7. Remarks			
1-15-62 *submitted monthly thereafter 2-6134-0-5		Date 1-10-62 64 D2-5697-16 Vol. IV Page 62	

1.1.3.3	QUALIFICATION TEST PLAN		11	
Program Element No.			Brief No.	
1. Item Tested <b>ELEVON SERVO FEEDBACK TRANSDUCER</b>				
Spec. & Dwg. No. (s) 10- 01036				
Used-On Dwg. No. - - - - - Elevon Actuator Assy - Hydraulic				
Supplier				
Supplier's Address				
Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By
Test Plan				
Test Requirements	10-01036	2-1-62		
Test Procedures				
Start Test				
Complete Test				
First Status Report*				
Final Report		6-4-62		
3. Summary of Tests Required				
Before being accepted by Boeing for use on the higher assembly the supplier will be required to accomplish the following tests:				
1. Performance    2. Vibration    3. Temperature    5. MIL-E-5272C only as applicable.				
To be qualified in conjunction with Elevon Servo Actuator Subsystem 1.1.3.3 Brief 10, page 62				
Reliability (No test as such. Time and failure records will be made during development and qualification testing.)				
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)				
5. Test Conducted by: Organization Location				
6. Required Test Witnesses Organization				
7. Remarks Preliminary information				
		Date	1-10-62	
1-15-62	65		D2-5697-16 Vol. IV	Page 63
*submitted monthly thereafter 2-6181-0-5				

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1.1.3.3	QUALIFICATION TEST PLAN				12	
Program Element No.					Brief No.	
1. Item Tested						
ELEVON HYDRAULIC VALVE ASSEMBLY						
Spec. & Dwg. No. (s) 10-81007						
Used-On Dwg. No. - - - - - Elevon Actuator Assy - Hydraulic						
Supplier						
Supplier's Address						
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By		
Test Plan						
Test Requirements	10-81007	9-2-61	9/3/61			
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report						
3. Summary of Tests Required						
Before being accepted by Boeing for use on the higher assembly the supplier will be required to accomplish the following tests:						
1. Performance    2. Vibration    3. Temperature    5. MIL-E-5272C only as applicable						
To be qualified in conjunction with Elevon Servo Actuator Subsystem 1.1.3.3 Brief 10, page 62 and Rudder Servo Act. Subsystem 1.1.3.3, Brief 7, page 59. Reliability (No test as such. Time and failure records will be made during development and qualification testing.)						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
5. Test Conducted by: Organization Location						
6. Required Test Witnesses Organization						
7. Remarks Preliminary information						
Date 1-10-62						
1-15-62 *submitted monthly thereafter 2-6131-0-5		66		D2-5597-16 Vol. IV		Page 64

1.1.3.3		QUALIFICATION TEST PLAN		13	
Program Element No.				Brief No.	
1. Item Tested		Glider Hydraulic Accessory Package			
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	This Sheet	1-12-62	1-10-62		
Test Requirements					
Test Procedures					
Start Test					
Complete Test		7-16-62			
First Status Report*		3-31-63			
Final Report					
3. Summary of Tests Required					
a. Pressure drop tests					
b. Filtration tests - Efficiency, particle size, and capacity					
c. Relief valve operating pressure tests					
d. Pressure switch performance tests					
e. Check valve back leakage tests					
f. Pressure transducer performance tests					
g. Vibration tests					
h. Proof and burst pressure tests					
i. Endurance cycling tests of:					
(1) Accumulator					
(2) Relief Valve					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Assembly by Mechanical-Propulsion Lab.		Location Annex A	
		& Components by Vendors			
6. Required Test Witnesses		2-6134-1			
Organization		Dyna-Soar Hydraulics			
7. Remarks					
Date 1-10-62					
1-15-62		67		D2-5697-16 Vol. IV	
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1.1.3.3	QUALIFICATION TEST PLAN		14	
Program Element No.			Brief No.	
1. Item Tested     Glider Hydraulic Flexible Lines (Typical Critical Assemblies)				
Spec. & Dwg. No. (s)				
Used-On Dwg. No.				
Supplier				
Supplier's Address				
Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submittal Dates		Approval
		Schedule	Actual	Date     By
Test Plan	This Book	1-12-62	1-10-62	
Test Requirements				
Test Procedures				
Start Test				
Complete Test				
First Status Report*				
Final Report				
3. Summary of Tests Required				
a. Proof and burst pressure tests				
b. Endurance tests under high temperature, maximum flexure, pressure impulse, and vibration conditions.				
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)				
a. Protected test cell with radiant heating and vibration testing equipment.				
b. Small altitude chamber with radiant heat source.     12M.				
5. Test Conducted by:     Vendor and Boeing				
Organization     Mechanical-Propulsion     Location     Annex A				
Laboratory				
6. Required Test Witnesses     2-6134-1				
Organization     Dyna-Soar Hydraulics				
7. Remarks				
Date     1-10-62				
1-15-62		68		Page 66
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<b>1.1.3.3</b>	<b>QUALIFICATION TEST PLAN</b>		<b>15</b>	
Program Element No.				Brief No.
<b>1. Item Tested</b> <b>Glider Hydraulic System Heat Exchanger</b> Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number				
<b>2. Schedule Summary</b>				
<b>Task</b>	<b>Reference Doc. No.</b>	<b>Submittal Dates</b>		<b>Approval</b>
		<b>Schedule</b>	<b>Actual</b>	<b>Date      By</b>
Test Plan				
Test Requirements	10-20917		Rev. 5-9-61	
Test Procedures				
Start Test				
Complete Test				
First Status Report*				
Final Report				
<b>3. Summary of Tests Required</b> a. Pressure Drop Tests b. Heat Extraction Tests c. Vibration Tests d. Proof and Burst Pressure Tests				
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>				
<b>5. Test Conducted by:</b> Environmental Control System Organization Vendor (AIResearch)      Location Los Angeles, California				
<b>6. Required Test Witnesses</b> 2-0134-1 Organization      Dyna-Soar Hydraulics				
<b>7. Remarks</b>				
Date      8-14-61				
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HYDRAULICS

1.1.3.3	QUALIFICATION TEST PLAN		16	
Program Element No.			Brief No.	
1. Item Tested <b>Glider Hydraulic Pump</b>  Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By
Test Plan				
Test Requirements	D2-7616		Rev. 4-12-61	
Test Procedures				
Start Test				
Complete Test				
First Status Report*				
Final Report				
3. Summary of Tests Required  The pump is to be qualified as a component to the Preproduction Tests specified in D2-7616 which includes various performance and endurance tests. In addition, it will be qualified as a component of the Accessory Power Unit in accordance with 10-20912.				
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)				
5. Test Conducted by: Pump Vendor (Dortch Products Div.) South Bend, Indiana Organization APU Vendor (Sundstrand Aviation) Location Denver, Colorado				
6. Required Test Witnesses 2-0134-1 Organization Dyna-Soar Hydraulics				
7. Remarks				
Date 8-14-61				
*submitted monthly thereafter 2-6181-0-5		70	D2-5697-16 Vol. IV	Page 68

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1.1.3.3	QUALIFICATION TEST PLAN				17	
Program Element No.					Brief No.	
1. Item Tested						
Glider Hydraulic Reservoir						
Spec. & Dwg. No. (s)						
Used-On Dwg. No.						
Supplier						
Supplier's Address						
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submission Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan	This Sheet	1-12-62	1-10-62			
Test Requirements						
Test Procedures						
Start Test						
Complete Test		7-16-62				
First Status Report*		3-31-63				
Final Report						
3. Summary of Tests Required						
a. Fill and Overflow Tests						
b. Vibration Tests						
c. Proof and Burst Pressure Tests						
d. Endurance Cycling Tests						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
5. Test Conducted by: 2-5354						
Organization Mechanical-Propulsion Laboratory			Location Annex D			
6. Required Test Witnesses 2-6134-1						
Organization			Dyna-Soar Hydraulics			
7. Remarks						
1-15-62		Date		1-10-62		
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1.1.3.3	QUALIFICATION TEST PLAN	18
Program Element No.		Brief No.

1. Item Tested      Glider Hydraulic Reservoir Relief Valve

Spec. & Dwg. No. (s)      10-61117

Used-On Dwg. No.      - - - - - Reservoir Assy - Hydraulic

Supplier

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-61117	3-13-62			
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

3. Summary of Tests Required

- a. Operating Pressure Tests
- b. Vibration Tests
- c. Proof and Burst Pressure Tests

4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

5. Test Conducted by:

Organization	Vendor	Location
--------------	--------	----------

6. Required Test Witnesses

Organization	2-6131-1 Dyna-Soar Hydraulics
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7. Remarks

1-15-62      Date      1-10-62

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1.1.3.3		QUALIFICATION TEST PLAN		10	
Program Element No.				Brief No.	
1. Item Tested Glider Hydraulic Return Line Filter					
Spec. & Dwg. No. (s) 10-91039					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task		Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By
Test Plan					
Test Requirements		10-91039	9-1-61	10-17-61	
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
a. Pressure Drop Tests					
b. Filtration Efficiency Tests					
c. Vibration Tests					
d. Proof and Burst Pressure Tests					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by: Organization Vendor Location					
6. Required Test Witnesses 2-6134-1 Organization Dyna-Soar Hydraulics					
7. Remarks					
1-15-62		Date		1-10-62	
*submitted monthly thereafter 2-6181-0-5		73		D2-5697-16 Vol. IV	
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1.1.3.3		QUALIFICATION TEST PLAN		20	
Program Element No.				Brief No.	
1. Item Tested		Glider Self-Sealing Hydraulic Couplings 			
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By	
Test Plan					
Test Requirements					
Test Procedures			OPEN		
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
a. Pressure drop tests through flow and temperature range					
b. Disconnect tests					
c. Proof and burst pressure tests					
d. Endurance tests under conditions of temperature pressure impulse, and vibration.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Vendor		Location	
6. Required Test Witnesses 2-6134-1					
Organization		Dyna-Soar Hydraulics			
7. Remarks					
 The present BAC standard coupling may be used and if so this test plan will be deleted.					
1-15-62		Date		1-10-62	
*submitted monthly thereafter		74		D2-5697-16	
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1.1.3.3	<b>QUALIFICATION TEST PLAN</b>		21	
Program Element No.			Brief No.	
<b>1. Item Tested</b> Glider Hydraulic Tubing Runs (Typical Critical Assemblies)				
Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number				
<b>2. Schedule Summary</b>				
<b>Task</b>	<b>Reference Doc. No.</b>	<b>Submittal Dates</b>		<b>Approval</b>
		Schedule	Actual	Date      By
Test Plan				
Test Requirements				
Test Procedures				
Start Test				
Complete Test				
First Status Report*				
Final Report				
<b>3. Summary of Tests Required</b>				
a. Proof and burst pressure tests b. Vibration tests of assemblies mounted to simulated glider structure at temperature.				
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>				
a. Protected test cell with radiant heating and vibration testing equipment. b. Small altitude chamber with radiant heat source.				
<b>5. Test Conducted by:</b>		2-5354		
Organization	Mechanical-Propulsion Laboratory	Location	Annex A	
<b>6. Required Test Witnesses</b>		H-6154-1		
Organization	Dyna-Soar Hydraulics			
<b>7. Remarks</b>				
		Date      1-10-62		
1-15-62		75		D2-5697-16
*submitted monthly thereafter				Page 73
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HYDRAULICS

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1.1.3.3	<b>QUALIFICATION TEST PLAN</b>		22
Program Element No.			Brief No.
<b>1. Item Tested</b> Glider Hydraulic System (Operational Mock-up)			
Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number			
<b>2. Schedule Summary</b>			
Task	Reference Doc. No.	Submittal Dates Schedule    Actual	Approval Date      By
Test Plan	THIS SPEC.		1-2-62
Test Requirements	D2-7524 U >	>	
Test Procedures			
Start Test			
Complete Test			
First Status Report*			
Final Report			
<b>3. Summary of Tests Required</b>			
a) Performance tests to determine compliance with Flight Control System performance requirements under simulated aerodynamic and inertial load conditions at approximately 75°F ambient room temperature and fluid temperatures ranging from 100 to 400°F.			
b) Performance tests to determine compliance with minimum Flight Control System performance requirements under partial Hydraulic System failure conditions.			
<b>4. Special Facilities and/or Test Equipment (include Estimated Lead Time)</b>			
<b>5. Test Conducted by:</b> 2-5354			
Organization    Mechanical-Propulsion Laboratory		Location    Seattle	
<b>6. Required Test Witnesses</b> 2-6134-1			
Organization    Dyna-Soar Hydraulics			
<b>7. Remarks</b>			
<div style="display: flex; align-items: center;"> <div style="width: 50px; text-align: center;">1</div> <div>See integration test operational mock-up schedule.</div> </div>			
<div style="display: flex; align-items: center;"> <div style="width: 50px; text-align: center;">2</div> <div>Memo 2-6130-0-470, dated 12-27-61</div> </div>			
Date 1-10-62			
1-15-62	<b>76</b>	D2-5697-16 Vol. IV	Page 75.1
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1.1.3.3	<b>QUALIFICATION TEST PLAN</b>		23	
Program Element No.			Brief No.	
1. Item Tested <span style="float: right;">Glider Hydraulic System (Environmental Control &amp; Secondary Power Integration Tests)</span> Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submittal Dates Schedule / Actual		Approval Date      By
Test Plan	2-5354-1	1-2-62		
Test Requirements	2-5354			
Test Procedures				
Start Test				
Complete Test				
First Status Report*				
Final Report				
3. Summary of Tests Required <ul style="list-style-type: none"> <li>a) Performance tests to determine compliance with Hydraulic System performance requirements under inertia load conditions at simulated altitude and temperature environment and nominal fluid temperatures.</li> <li>b) Performance tests to determine compliance with minimum Hydraulic System performance requirements under conditions of partial failure of the Hydraulic and Fluid Cooling Systems.</li> </ul>				
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)				
5. Test Conducted by: 2-5354 Organization Mechanical-Propulsion Lab Location Tulalip				
6. Required Test Witnesses 2-5134-1 Organization Dyna-Soar Hydraulics				
7. Remarks <div style="margin-top: 10px;"> <div>1. See integration test environmental simulator test schedule.</div> <div>2. General information in Design Bulletin 23-1508-121</div> <div>3. 12-00354</div> </div> <div style="text-align: right; margin-top: 10px;">Date 1-10-62</div>				
1-15-62 *submitted monthly thereafter 2-5134-0-5		77	D2-5697-16 Vol. IV	
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1.1.3.3	QUALIFICATION TEST PLAN	24
Program Element No.		Brief No.

1. Item Tested Fluid Level Indicator

Spec. & Dwg. No. (s) 10-81109

Used-On Dwg. No. - - - - Reservoir Assy Hydraulic

Supplier

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	by
Test Plan					
Test Requirements	10-81109	1-20-62			
Test Procedures					
Start Test:					
Complete Test					
First Status Report*					
Final Report					

3. Summary of Tests Required

- a) Pressure
- b) Stroke and Linearity
- c) Vibration
- d) Life
- e) Shock
- f) Overpressure
- g) Electrical Insulation
- h) Visual Inspection for Workmanship and Drawing Compliance

4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

5. Test Conducted by:

Organization

Location

Vendor

6. Required Test Witnesses

Organization

7. Remarks

Date 1-10-62

1-15-62

\*submitted monthly thereafter

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1.1.3.3	QUALIFICATION TEST PLAN	25
Program Element No.		Brief No.

1. Item Tested  $H_2$  Pressure Transducer

Spec. & Dwg. No. (s) 10-81110

Used-On Dwg. No. - - - - - Reservoir Assy - Hydraulic

Supplier

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	by
Test Plan					
Test Requirements	10-81110	2-10-62			
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

3. Summary of Tests Required

- a) Hermetic Seal
- b) Pressure
- c) Sand and Dust
- d) Humidity
- e) Linearity
- f) Vibration
- g) Life
- h) Shock
- i) Overpressure
- j) Electrical Insulation
- k) Visual inspection for workmanship and Dwg compliance

4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

5. Test Conducted by:

Organization Vendor

Location

6. Required Test Witnesses

Organization

7. Remarks

Date 1-10-62

1-15-62

\*submitted monthly thereafter

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1.1.3.3	<b>QUALIFICATION TEST PLAN</b>		25	
Program Element No.			Brief No.	
<b>1. Item Tested</b> Pressure Switch, Hydraulic Spec. & Dwg. No. (s)      10-81033 Used-On Dwg. No.      - - - - Accessory Package Assy - Hydraulic Supplier Supplier's Address Supplier's Part Number				
<b>2. Schedule Summary</b>				
Task	Reference Doc. No.	Submittal Dates Schedule   Actual		Approval Date      By
Test Plan				
Test Requirements	10-81033			
Test Procedures			10-21-61	
Start Test				
Complete Test				
First Status Report*				
Final Report				
<b>3. Summary of Tests Required</b>				
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;">           a) Ignition proof            b) Pulse pressure            c) Burst pressure            d) Proof pressure            e) Hermetic seal            f) Contact drop            g) Dielectric            h) Insulation resistance            i) Low temperature         </div> <div style="width: 48%;">           j) High temperature            k) Sand and Dust            l) Humidity            m) Over temperature            n) Vibration            o) Shock         </div> </div>				
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>				
<b>5. Test Conducted by:</b>				
Organization	Vendor	Location		
<b>6. Required Test Witnesses</b>				
Organization				
<b>7. Remarks</b>				
Date 1-10-62				
1-15-62 *submitted monthly thereafter 2-61-0-5		80	D2-5697-16 Vol. IV	Page 73.5

1.1.3.3 <b>Program Element No.</b>	<b>QUALIFICATION TEST PLAN</b>	27 <b>Brief No.</b>
<b>1. Item Tested</b> Pressure Transmitter and Indicator Spec. & Dwg. No. (s)      10-81055 Used-On Dwg. No.      - - - - - Accessory Package Assy - Hydraulic Supplier Supplier's Address Supplier's Part Number		
<b>2. Schedule Summary</b>		
Task	Reference Doc. No.	Submittal Dates Schedule      Actual
Test Plan		Approval Date      By
Test Requirements	10-81055	
Test Procedures		12/3/61
Start Test		
Complete Test		
First Status Report*		
Final Report		
<b>3. Summary of Tests Required</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <u>Transmitter and Indicator</u>            a) Dielectric            b) Hermetic seal            c) Insulation Resistance            d) Low Temp.            e) High Temp.            f) Sand and Dust            g) Humidity            h) Ignition            i) Overtemp.            j) Vibration            k) Drop (shipping configuration)         </div> <div style="width: 45%;"> <u>Transmitter only</u>            a) Burst pressure            b) Proof pressure            c) Pulse Pressure         </div> </div>		
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>		
<b>5. Test Conducted by:</b> <div style="display: flex; justify-content: space-between;"> <span>Organization      Vendor</span> <span>Location</span> </div>		
<b>6. Required Test Witnesses</b> Organization		
<b>7. Remarks</b>		
Date 1-10-62		
1-15-62 *submitted monthly thereafter 2-6181-0-5		<b>81</b>
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1.1.3.3		<b>QUALIFICATION TEST PLAN</b>		23	
Program Element No.		Ref No.			
1. Item Tested <span style="float: right;">Pressure Relief Valve Hydraulic</span> Spec. & Dwg. No. (s) <span style="float: right;">10-81057</span> Used-On Dwg. No. <span style="float: right;">- - - - - Accessory Package Assy - Hydraulic</span> Supplier Supplier's Address Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-81057	4-25-62			
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
a) Proof pressure b) Humidity c) Low temperature d) High temperature e) over temperature f) Vibration g) Shock h) Endurance i) Visual examination for workmanship and drawing compliance					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization	Vendor	Location			
6. Required Test Witnesses					
Organization					
7. Remarks					
1-15-62		Date 1-10-62			
*submitted monthly thereafter		82		D2-5697-16 Vol. IV	Page 73.7
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1.1.3.3		QUALIFICATION TEST PLAN		29	
Program Element No.				Brief No.	
1. Item Tested <b>Filter - Hydraulic Accessory Unit</b> Spec. & Dwg. No. (s) <b>10-81070</b> Used-On Dwg. No. <b>- - - - - Accessory Package Assy - Hydraulic</b> Supplier Supplier's Address Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-81070	4-25-62			
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
a) Visual Inspection for workmanship and drawing compliance b) Proof pressure c) Pressure drop d) Air inclusion e) High temperature f) Pressure pulse g) Vibration h) Sand and Dust i) Humidity j) Shock k) Drop l) Over temperature      m) Burst					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Vendor		Location	
6. Required Test Witnesses					
Organization					
7. Remarks					
Date 1-10-62					
1-15-62		83		D2-5697-16	
*submitted monthly thereafter				Vol. IV	
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1.1.3.3	QUALIFICATION TEST PLAN		30
Program Element No.			Brief No.
1. Item Tested      Swival Joint - Hydraulic Spec. & Dwg. No. (s)      10-81111 Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number			
2. Schedule Summary			
Task	Reference Doc. No.	Submittal Dates Schedule   Actual	Approval Date   By
Test Plan	This Sheet		1-12-62
Test Requirements	10-81111	1-10-62	
Test Procedures			
Start Test			
Complete Test			
First Status Report*			
Final Report			
3. Summary of Tests Required a) Visual examination for workmanship and drawing compliance b) Oil immersion c) Proof pressure d) Low pressure e) Reverse Leakage f) Pressure drop g) Low temperature h) Transient Temperature i) High temperature j) Over temperature k) Sand and dust l) Humidity m) Acceleration n) Vibration o) Shock p) Endurance q) Burst pressure			
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)			
5. Test Conducted by:			
Organization	Vendor	Location	
6. Required Test Witnesses			
Organization			
7. Remarks			
Date 1-10-62			
1-15-62 *submitted monthly thereafter 2-6181-0-5	84	D2-5697-16 Vol. IV	Page 73.9

1.1.3.3	QUALIFICATION TEST PLAN		31
Program Element No.			Brief No.
1. Item Tested      Temperature Transmitter and Indicator Spec. & Dwg. No. (s)      10-81118 Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number			
2. Schedule Summary			
Task	Reference Doc. No.	Submittal Dates Schedule   Actual	Approval Date      By
Test Plan			
Test Requirements	10-81118	6-4-62	
Test Procedures			
Start Test			
Complete Test			
First Status Report*			
Final Report			
3. Summary of Tests Required			
a) Temperature b) Pressure c) Environment			
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)			
5. Test Conducted by:			
Organization	Vendor	Location	
6. Required Test Witnesses			
Organization			
7. Remarks			
Preliminary information details will be provided after spec 10-81118 is released.			
		Date 1-10-62	
1-15-62 *submitted monthly thereafter 2-6181-0-5		85	D2-5697-16 Vol. IV
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1.1.3.4	QUALIFICATION TEST PLAN				1	
Program Element No.					Brief No.	
1. Item Tested Reaction Control Power Component (in entirety)						
Spec. & Dwg. No. (s) D2-7638-1 Used-On Dwg. No. Supplier Thompson Ramo Wooldridge (TAPCO Group) Supplier's Address Cleveland, Ohio Supplier's Part Number None						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan						
Test Requirements						
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report		2-1-63				
3. Summary of Tests Required						
1. Non-environmental performance test of one Reaction Control Power Component including hot-gas distribution lines and fitting. (Note: Hot-gas distribution line and fittings will be supplied by Boeing who will manufacture and qualification test them at Boeing.)						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
Cryogenic storage, supply and laboratory equipment for hydrogen and oxygen.						
5. Test Conducted by:						
Organization TAPCO				Location Cleveland, Ohio		
6. Required Test Witnesses						
Organization				Boeing project personnel as necessary		
7. Remarks						
D2-7638-1 "Design Procurement Specification - Reaction Control Power Component-Integrated Hydrogen Cooling and Secondary Power Subsystem." Some of the testing required is given in this document. Detailed test plan, test requirements and test procedures will be submitted for Boeing approval by TAPCO. Extent of testing will be determined by TAPCO with Boeing approval.						
				Date 8-14-61		
*submitted monthly thereafter 2-6181-0-5				86		D2-5697-16 Vol. IV
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1.1.3.4	QUALIFICATION TEST PLAN				2	
Program Element No.					Brief No.	
<b>1. Item Tested</b> Reaction Control Power Component Electronic Package Spec. & Dwg. No. (s) Same as Supplier Part Number Used-On Dwg. No. Supplier Thompson Ramo Wooldridge (TAPCO Group) Supplier's Address Cleveland, Ohio Supplier's Part Number						
<b>2. Schedule Summary</b>						
<b>Task</b>	<b>Reference Doc. No.</b>	<b>Submittal Dates</b>		<b>Approval</b>		
		<b>Schedule</b>	<b>Actual</b>	<b>Date</b>	<b>By</b>	
Test Plan						
Test Requirements						
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report		2-1-63				
<b>3. Summary of Tests Required</b> 1. Vibration test 2. Shock test						
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b> None						
<b>5. Test Conducted by:</b> Organization TAPCO Location Cleveland, Ohio						
<b>6. Required Test Witnesses</b> Organization Boeing project personnel as necessary						
<b>7. Remarks</b> D2-7638-1 "Design Procurement Specification-Reaction Control Power Component-Integrated Hydrogen Cooling and Secondary Power Subsystem." Some of the testing required is given in this document. Detailed test plan, test requirements and test procedures will be submitted for Boeing approval by TAPCO. Extent of testing will be determined by TAPCO with Boeing approval. Date 8-14-61						
*submitted monthly thereafter 2-6/81-0-5		87		D2-5697-16 Vol. IV		Page 75

1.1.3.4	QUALIFICATION TEST PLAN				3	
Program Element No.					Brief No.	
1. Item Tested      Reaction Control Power Component Gas Generator						
Spec. & Dwg. No. (s) Same as Supplier's Part No.						
Used-On Dwg. No.						
Supplier      Thompson Ramo Wooldridge (TAPCO Group)						
Supplier's Address      Cleveland, Ohio						
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates Schedule   Actual		Approval Date      By		
Test Plan						
Test Requirements						
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report		2-2-61				
3. Summary of Tests Required						
1. Combined environmental temperature-altitude and performance testing						
2. Vibration testing						
3. Strength testing (proof pressure, burst pressure and structural strength)						
4. MIL-E-5272 testing as necessary 1						
5. Extended limits testing (life testing, extended temperature limit testing)						
6. Shock testing						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
Cryogenic storage supply and laboratory equipment for hydrogen and oxygen.						
5. Test Conducted by:						
Organization				Location		
TAPCO.				Cleveland, Ohio		
6. Required Test Witnesses						
Organization				Boeing project personnel as necessary		
7. Remarks    D2-7638-1 "Design Procurement Specification-Reaction Control Power Component-Integrated Hydrogen Cooling and Secondary Power Subsystem." Some of the testing required is given in this document. Detailed test plan, test requirements and test procedures will be submitted for Boeing approval by TAPCO. Extent of testing will be determined by TAPCO with Boeing approval.						
Date    8-14-61						
*submitted monthly thereafter 2-6/81-0-5		88		D2-5697-16 Vol. IV		Page 76

1.1.3.4	QUALIFICATION TEST PLAN		4		
Program Element No.			Brief No.		
1. Item Tested Reaction Control Power Component Hot-Gas Distribution Line and Fittings Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Boeing Supplier's Address Seattle Supplier's Part Number Same as Associate Contractor Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date By	
Test Plan	This Sheet				
Test Requirements	D2-8130 (Tab D)				
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report		2-1-63			
3. Summary of Tests Required					
1. Pressure drop					
2. Pressure cycling and temperature cycling at simulated operating conditions					
3. Vibration testing of representative tubing and fitting assemblies					
4. Proof and burst pressure tests at operating temperature					
(NOTE: Detailed test plans will be added at a later date.)					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Location			
		To be determined			
6. Required Test Witnesses					
Organization					
Boeing project personnel as necessary					
7. Remarks					
D2-8130- (Tab D) "Performance Specification, Reaction Control Power Component of Secondary Power Subsystem Section V." More detailed requirements will be added to this document when they are available.					
Date 8-14-61					
*submitted monthly thereafter 2-61-0-5		89		D2-5697-16 Vol. IV	
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1.1.3.4	QUALIFICATION TEST PLAN		5
Program Element No.			Brief No.
1. Item Tested			
Reaction Control Power Component Thrust Control Valves and Nozzles			
Spec. & Dwg. No. (s)		Number same as Supplier's number	
Used-On Dwg. No.			
Supplier			
Supplier's Address			
Supplier's Part Number			
2. Schedule Summary			
Task	Reference Doc. No.	Submittal Dates Schedule Actual	Approval Date By
Test Plan			
Test Requirements			
Test Procedures			
Start Test			
Complete Test			
First Status Report*			
Final Report		2-1-63	
3. Summary of Tests Required			
1. Combined environmental temperature-altitude and performance test			
2. Vibration testing			
3. Strength testing (proof pressure, burst pressure and structural strength)			
4. MIL-E-5272 testing as necessary 1			
5. Extended limits testing (life testing, extended temperature limits testing)			
6. Shock testing			
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)			
None			
5. Test Conducted by:			
Organization		Location	
TAPCO		Cleveland, Ohio	
6. Required Test Witnesses			
Organization			
Boeing project personnel as necessary			
7. Remarks D2-7638-1 "Design Procurement Specification-Reaction Control Power Component-Integrated Hydrogen Cooling and Secondary Power Subsystem." Some of the testing required is given in this document. Detailed test plan, test requirements and procedures will be submitted for Boeing approval by TAPCO. Extent of testing will be determined by TAPCO with Boeing approval.			
Date 8-14-61			
*submitted monthly thereafter 2-6181-0-5		90	D2-5697-16 Vol. IV
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1.1.3.5 Program Element No.	<b>QUALIFICATION TEST PLAN</b>			1	
1. Item Tested  <div style="text-align: center;">Landing Gear System</div> Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number			Brief No.		
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	by
Test Plan		12-27-61	12-27-61		
Test Requirements		11-15-62			
Test Procedures		1-15-63			
Start Test		2-15-63			
Complete Test		3-15-63			
First Status Report*		3-15-63			
Final Report		4-15-63			
3. Summary of Tests Required To qualify the landing gear system (includes landing gear extension system) operation by subjecting it to the following test and environmental conditions. <ol style="list-style-type: none"> <li>1. One extension - While equipment is stabilized at -65°F.</li> <li>2. One extension - While equipment is being submitted to thermal conditions simulating normal re-entry.</li> <li>3. One extension - At room temperature after "2" above.</li> <li>4. Repeat "1 and 2" above until 10 consecutive successful extensions have been accomplished.</li> </ol>					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time) The glider structure forward of the pilots compartment that supports the nose landing gear and landing gear doors will be required. The nose gear doors and surrounding skin panels will be installed. The landing gear extension system will be installed such that the nose gear system operates the gear and doors.* The main gear system will operate against Dummy Loads.					
5. Test Conducted by: <div style="display: flex; justify-content: space-between;"> <span>Organization    Boeing</span> <span>Location        Tulalip</span> </div>					
6. Required Test Witnesses (1) <div style="display: flex; justify-content: space-between;"> <span>Organization    Mechanism and Pneumatics</span> <span>2-6134-3</span> </div>					
7. Remarks *Due to similarity between the main gear system and the nose gear system main gear and doors will not be operated for qualification of the landing gear system.					
		Date		12-26-61	
1-15-62 *submitted monthly thereafter 2-6134-0-5		<b>91</b>		D2-5697-16 Vol. IV	Page 78.1

1.1.3.5	QUALIFICATION TEST PLAN			1	
Program Element No.				Brief No.	
1. Item Tested					
Landing Gear Extension Subsystem					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		12-27-61	12-27-61		
Test Requirements		8-13-62			
Test Procedures		9-12-62			
Start Test		11-12-62			
Complete Test		12-12-62			
First Status Report*		12-12-62			
Final Report		1-12-63			
3. Summary of Tests Required					
To qualify all the components of the landing gear extension subsystem (pilot's control, gas pressure source, actuators and distribution system) as a complete subsystem.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Vendor Facilities					
5. Test Conducted by:					
Organization	Vendor	Location			
6. Required Test Witnesses (1)					
Organization	Mechanisms and Pneumatic				
7. Remarks					
Design Procurement Specification					
Date 12-26-61					
1-15-62		92		D2-5697-16 Vol. IV	
*submitted monthly thereafter 2-5181-C-5				Page 79	



1.1.3.5		QUALIFICATION TEST PLAN		2	
Program Element No.				Brief No.	
1. Item Tested		Landing Gear Extension - Actuators			
Spec. & Dwg. No. (s) 10-		<div>Deleted - this component will be qualified at the subsystem level.</div>			
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		1-25-62			
Test Requirements	10-	9-25-61			
Test Procedures		2-25-62			
Start Test		4-25-62			
Complete Test		6-25-62			
First Status Report*		5-25-62			
Final Report		7-25-62			
3. Summary of Tests Required					
Performance Tests					
Environmental Tests					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Vendor facilities					
5. Test Conducted by:					
Organization		Vendor		Location	
6. Required Test Witnesses					
Organization		Engineering			
7. Remarks					
This includes nose and main landing gear extension, and nose and main landing gear door actuators.					
*Source control drawing release date.					
1-15-62		Date		1-11-62	
*submitted monthly thereafter		93		D2-5697-16	
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1.1.2.5	<b>QUALIFICATION TEST PLAN</b>		3
Program Element No.			Brief No.
<b>1. Item Tested</b> Landing Gear Extension - H <sub>2</sub> Bottle Spec. & Dwg. No. (s)    10- <del>XXXXXXXXXXXXXXXXXXXX</del> Used-On Dwg. No.      Deleted - this component will be qualified Supplier      at the subsystem level. Supplier's Address <del>XXXXXXXXXXXXXXXXXXXX</del> Supplier's Part Number <del>XXXXXXXXXXXXXXXXXXXX</del>			
<b>2. Schedule Summary</b>			
Task	Reference Doc. No.	Submittal Dates Schedule    Actual	Approval Date      By
Test Plan		3-1-62	
Test Requirements	10-	11-13-61*	
Test Procedures		4-2-62	
Start Test		6-1-62	
Complete Test		8-1-62	
First Status Report*		7-2-62	
Final Report		9-3-62	
<b>3. Summary of Tests Required</b> Proof Pressure Tests Burst Pressure Tests			
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b> Vendor facilities			
<b>5. Test Conducted by:</b> Organization      Vendor      Location			
<b>6. Required Test Witnesses</b> Organization      Engineering			
<b>7. Remarks</b> *Source control drawing release date.			
		Date	1-11-62
1-15-62	<b>94</b>		D2-5697-16 Vol. IV
*submitted monthly thereafter 2-6181-0-5			Page 31

PNEUMATICS

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1.1.3.5	<b>QUALIFICATION TEST PLAN</b>		4
Program Element No.			Brief No.
<b>1. Item Tested</b> <div style="text-align: right; margin-right: 50px;">Landing Gear Extension - N<sub>2</sub> Valve - (Pilot's Control Valve)</div> Spec. & Dwg. No. (s)    10- Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number			
<p>Deleted - this component will be qualified at the subsystem level.</p>			
<b>2. Schedule Summary</b>			
Task	Reference Doc. No.	Submittal Dates Schedule / Actual	Approval Date      By
Test Plan		3-1-62	
Test Requirements	10-	11-13-61	
Test Procedures		4-2-62	
Start Test		5-1-62	
Complete Test		7-1-62	
First Status Report*		7-2-62	
Final Report		8-3-62	
<b>3. Summary of Tests Required</b>			
Performance Tests Environmental Tests			
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>			
Vendor facilities			
<b>5. Test Conducted by:</b>			
Organization	Vendor	Location	
<b>6. Required Test Witnesses</b>			
Organization	Engineering		
<b>7. Remarks</b>			
*Source control drawing release date.			
		Date	1-11-62.
1-15-62 *submitted monthly thereafter 2-6181-0-5		<b>95</b>	D2-5697-16 Vol. IV
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1.1.3.5	<b>QUALIFICATION TEST PLAN</b>		5	
Program Element No.			Brief No.	
1. Item Tested				
Window Heat Shield Jettison Subsystem				
Spec. & Dwg. No. (s)				
Used-On Dwg. No.				
Supplier				
Supplier's Address				
Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submittal Dates		Approval
		Schedule	Actual	Date      By
Test Plan		12-27-61	12-27-61	
Test Requirements		8-13-62		
Test Procedures		8-12-62		
Start Test		11-12-62		
Complete Test		12-12-62		
First Status Report*		12-12-62		
Final Report		1-12-63		
3. Summary of Tests Required				
To qualify all the components of the window heat shield subsystem (pilot's control, gas pressure source, actuator and distribution system) as a complete subsystem.				
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)				
Vendor Facilities				
5. Test Conducted by:				
Organization	Vendor	Location		
6. Required Test Witnesses (1)				
Organization	Mechanisms and Pneumatic			
7. Remarks				
Design Procurement Specification				
		Date 12-26-61		
1-15-62 *submitted monthly thereafter 2-6181-0-5		<b>96</b>	D2-5697-16 Vol. IV	Page <b>83</b>

1.1.3.5	QUALIFICATION TEST PLAN	6
Program Element No.		Brief No.

### 1. Item Tested

Window Heat Shield Jettison - Actuator

Spec. & Dwg. No. (s) 10-

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

Deleted - this component will be qualified at the subsystem level.

### 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	by
Test Plan		2-1-62			
Test Requirements	10-	10-1-61*			
Test Procedures		3-1-62			
Start Test		5-1-62			
Complete Test		7-2-62			
First Status Report*		6-1-62			
Final Report		8-1-62			

### 3. Summary of Tests Required

Performance Tests  
Environmental Tests

### 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Vendor facilities

### 5. Test Conducted by: Vendor

Organization

Location

### 6. Required Test Witnesses

Organization Engineering

### 7. Remarks

\* Source Control drawing release data

Date

1-11-62

1-15-62

\* submitted monthly thereafter

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Pneumatics

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Pneumatics





1.1.3.5	QUALIFICATION TEST PLAN		7
Program Element No.			Brief No.
1. Item Tested			
Window Heat Shield Jettison - Gas Generator			
Spec. & Dwg. No. (s)	10-	<del>Deleted - this component will be qualified at the subsystem level.</del>	
Used-On Dwg. No.			
Supplier			
Supplier's Address			
Supplier's Part Number			
2. Schedule Summary			
Task	Reference Doc. No.	Submital Dates Schedule Actual	Approval Date By
Test Plan		2-1-62	
Test Requirements	10-	10-1-61*	
Test Procedures		3-1-62	
Start Test		5-1-62	
Complete Test		7-2-62	
First Status Report*		6-1-62	
Final Report		8-1-62	
3. Summary of Tests Required			
Performance Tests			
Environmental Tests			
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)			
Vendor facilities			
5. Test Conducted by: Vendor			
Organization		Location	
6. Required Test Witnesses			
Organization		Engineering	
7. Remarks			
* Source control drawing release date.			
Date		1-11-62	
1-15-62			
*submitted monthly thereafter			
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1.1.3.5	QUALIFICATION TEST PLAN		8	
Program Element No.			Brief No.	
1. Item Tested PITOT EXTENSION SUBSYSTEM Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submittal Dates		Approval
		Schedule	Actual	Date      By
Test Plan		12-28-61	12-28-61	
Test Requirements		8-13-62		
Test Procedures		9-12-62		
Start Test		11-12-62		
Complete Test		12-12-62		
First Status Report*		12-12-62		
Final Report		1-12-63		
3. Summary of Tests Required				
To qualify all the components of the pitot extension subsystem (pilot's control, gas pressure source, actuator and distribution system) as a complete subsystem.				
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)				
Vendor Facilities				
5. Test Conducted by:				
Organization		Location		
Vendor				
6. Required Test Witnesses (1)				
Organization		Mechanisms and Pneumatic		
7. Remarks				
Design Procurement Specification				
		Date	12-28-61	
1-15-62 *submitted monthly thereafter 2-6181-0-5		99	D2-5697-16 Vol. IV	Page 85.1

1.1.4	QUALIFICATION TEST PLAN		1		
Program Element No.			Brief No.		
1. Item Tested Environmental Control Subsystem					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier Boeing Company					
Supplier's Address Seattle					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	} 11 >				
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
Performance tests to demonstrate integration with other subsystems such as Secondary Power, Hydraulics, etc. and to verify interface with electronics, pilot, ground service equipment, auxiliary air launch equipment. Performance testing will include:					
Environmental Simulation					
Flight Tests, Ground Launch					
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Boeing Company		Location	
6. Required Test Witnesses					
Organization					
7. Remarks					
11 > PROVIDED 3-1-62					
Date		6-24-61			
1-15-62		100		D2-5697-16	
*submitted monthly thereafter				Vol. IV	
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1.1.4	QUALIFICATION TEST PLAN				2	
Program Element No.					Brief No.	
1. Item Tested Special Tubing						
Spec. & Dwg. No. (s) 10-81034 						
Used-On Dwg. No.						
Supplier						
Supplier's Address } 						
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan		3-62				
Test Requirements	10-81034	1-25-62				
Test Procedures		4-62				
Start Test		5-15-62				
Complete Test		7-15-62				
First Status Report*		6-15-62				
Final Report		6-15-62				
3. Summary of Tests Required						
Vibration						
Acceleration						
Shock						
Internal Pressure: Working, Proof, Burst						
Bend						
Pressure Drop						
Performance						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
5. Test Conducted by:						
Organization				Location		
6. Required Test Witnesses						
Organization						
7. Remarks						
 SCD 10-81034 to be released 1-25-62.						
 Vendor to be selected approx. 3-62.						
1-15-62		Date		1-3-62		
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1.1.4	QUALIFICATION TEST PLAN				3	
Program Element No.					Brief No.	
1. Item Tested						
Compartment Pressure Control						
Spec. & Dwg. No. (s) 10-81025						
Used-On Dwg. No.						
Supplier 						
Supplier's Address						
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan		2-62				
Test Requirements	10-81025	9-25-61	9-25-61	9-25-61	E.H. Dorman	
Test Procedures		3-62				
Start Test		5-15-62				
Complete Test		7-15-62				
First Status Report*		6-15-62				
Final Report		8-15-62				
3. Summary of Tests Required						
Performance Test to demonstrate compliance with requirements.						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
Altitude Chamber						
5. Test Conducted by:						
Organization				Location		
6. Required Test Witnesses						
Organization						
Boeing						
7. Remarks						
 Vendor to be selected, approx. 2-62.						
				Date	1-3-62	
1-15-62		*submitted monthly thereafter		102		D2-5697-16
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1.1.4.1		QUALIFICATION TEST PLAN		1	
Program Element No.		Brief No.			
1. Item Tested Cabin Selector Valve					
Spec. & Dwg. No. (s) 10-81024					
Used-On Dwg. No.					
Supplier					
Supplier's Address 					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		2-62			
Test Requirements	10-81024	8-15-61	8-20-61	8-20-61	B. J. Dorman
Test Procedures		8-15-61			
Start Test					
Complete Test					
First Status Report*					
Final Report		8-15-62			
3. Summary of Tests Required					
Leakage					
Pressure Drop					
Internal Pressure: Working, Proof, Burst					
Cycling					
Performance					
Vibration					
Shock					
Acceleration					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Vendor		Location	
6. Required Test Witnesses					
Organization		Boeing			
7. Remarks					
 Vendor to be selected approx. 2-62.					
1-15-62		Date		1-3-62	
*submitted monthly thereafter		103		D2-5697-16	
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1.1.4.2	QUALIFICATION TEST PLAN				1	
Program Element No.					Brief No.	
1. Item Tested <span style="float: right;">Tank-Liquid Nitrogen Storage</span> Spec. & Dwg. No. (s) <span style="float: right;">Boeing</span> Used-On Dwg. No. Supplier <span style="float: right;">Boeing</span> Supplier's Address Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan	1-15-62					
Test Requirements	1-15-62		8-3-61			
Test Procedures						
Start Test			1-8-63			
Complete Test			10-15-63			
First Status Report*			3-1-63			
Final Report			12-1-63			
3. Summary of Tests Required						
a) Cycle two tanks, 0 to working pressure to 0, with LN <sub>2</sub> - one to failure and one to 150 cycles. b) Vibrate tank sonically and mechanically thru the flight range with varying amounts of LN <sub>2</sub> . c) Run boil-off tests on above (b) tank in simulated environment of flight using normal LN <sub>2</sub> consumption and operation pressure. d) Subject LN <sub>2</sub> filled tank to crash loads. e) Pressurize LN <sub>2</sub> filled tanks to burst. (Three req'd)						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
Unknown at this time.						
5. Test Conducted by:						
Organization				Location		
Boeing Engr. Labs.				Seattle		
6. Required Test Witnesses						
Organization						
Boeing Engr. (Tank & Transition Group)						
7. Remarks						
Preliminary Information						
Data 1-11-62						
1-15-62		101		D2-5697-16		Page
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TANK DESIGN


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1.1.1.2 Program Element No.		QUALIFICATION TEST PLAN		2 Brief No.	
1. Item Tested Tank-Liquid Hydrogen Storage					
Spec. & Dwg. No. (s)		Boeing			
Used-On Dwg. No.		None			
Supplier		Boeing			
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	This document				
Test Requirements	D2-6057		11-60		
Test Procedures		11-62			
Start Test		1-2-62			
Complete Test		11-27-62			
First Status Report*		3-1-62			
Final Report		1-15-62			
3. Summary of Tests Required					
a) Cycle two tanks, 0 to working pressure to 0, with $Li_2$ , one to failure and one to 150 cycles. b) Vibrate tank sonically and mechanically thru the flight range with varying amounts of $Li_2$ . c) Run boil-off tests in simulated environment of flight using normal hydrogen consumption and operating pressures. d) Subject $Li_2$ filled tank to burst loads. e) Pressurize $Li_2$ filled tanks to burst (Three req'd.)					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Unknown at this time.					
5. Test Conducted by:					
Organization			Location		
Boeing Engr. Labs.			Seattle		
6. Required Test Witnesses					
Organization					
Boeing Engr. (Tank & Transition Group)					
7. Remarks					
 Preliminary Information					
		Date		1-11-62	
1-15-62		105		D2-5697-16	
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<div style="border-bottom: 1px solid black; padding-bottom: 2px;">1.1.4.2</div> <div style="border-bottom: 1px solid black; padding-bottom: 2px;">Program Element No.</div>	<b>QUALIFICATION TEST PLAN</b>	<div style="border-bottom: 1px solid black; padding-bottom: 2px;">3</div> <div style="border-bottom: 1px solid black; padding-bottom: 2px;">Brief No.</div>
<b>1. Item Tested</b> Tank-Liquid Oxygen Storage		
Spec. & Dwg. No. (s)      Boeing Used-On Dwg. No. Supplier      Boeing Supplier's Address Supplier's Part Number		
<b>2. Schedule Summary</b>		
Task	Reference Doc. No.	Submittal Dates Schedule   Actual
Test Plan	11-0052	11-60
Test Requirements	12-0052	11-60
Test Procedures	11-62	11-60
Start Test	1-2-63	11-60
Complete Test	2-12-63	11-60
First Status Report	3-1-63	11-60
Final Report	11-2-63	11-60
<b>3. Summary of Tests Required</b> <input type="checkbox"/>		
a) Cycle two tanks 0 to working pressure to .0, with $LiH_2$ , one to failure and one to 150 cycles. b) Vibrate tank sonically and mechanically thru the flight range with varying amounts of $Li_2$ . c) Run boil-off tests in simulated environment of flight using normal $Li_2$ consumption and operating pressure. d) Subject $Li_2$ filled tank to 100% loads. e) Pressurize $Li_2$ filled tanks to burst. (Three req'd)		
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>  Unknown at this time.		
<b>5. Test Conducted by:</b> <div style="display: flex; justify-content: space-between;"> <div>Organization Boeing Engr. Labs.</div> <div>Location Seattle</div> </div>		
<b>6. Required Test Witnesses</b> Organization Boeing Engr. (Tank & Transition Group)		
<b>7. Remarks</b>  <div style="display: flex; align-items: center;"> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 10px;"></div>           Preliminary Information         </div>		
<div style="text-align: right;">Date    1-11-62</div>		
1-15-62 *submitted monthly thereafter 2-6181-0-5	<b>106</b>	D2-5697-16 Vol. IV
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TASK DESIGN

1.1.4.3	QUALIFICATION TEST PLAN		1		
Program Element No.			Brief No.		
1. Item Tested Water Temperature Control Secondary Subsystem Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier <i>BOeing</i> Supplier's Address Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		10-31-62			
Test Requirements	22-8126	11-1-62			
Test Procedures		12-31-62			
Start Test		3-1-63			
Complete Test		4-1-64			
First Status Report*		7-1-63			
Final Report		7-1-64			
3. Summary of Tests Required					
3.1 Thermal Environment Flight 3.1.1 Thermal-Altitude 3.1.2 Orbit Capability 3.2 Mechanical Environment Flight 3.2.1 Vibration Mechanical 3.2.2 Vibration Acoustical 3.2.3 Simulated Accel. & Altitude 3.3 Non Flight Environment 3.3.1 Freezing Effect 3.3.2 Storage Life 3.3.3 Fungus Resistance 3.3.4 Humidity Effects					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
4.1 Temperature - Altitude Chamber with Cold Trap 4.2 Temperature - Humidity Controlled Chamber 4.3 Simulated Accel. & Altitude Centrifuge					
5. Test Conducted by:					
Organization			Location		
6. Required Test Witnesses					
Organization			Water Wall Group 2-6135-4		
7. Remarks					
Date 1-10-62 1-15-62 *submitted monthly thereafter 2-6181-0-5					
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1.1.4.3		QUALIFICATION TEST PLAN		2	
Program Element No.				Brief No.	
1. Item Tested Water Absorber					
Spec. & Dwg. No. (s) 10-20016					
Used-On Dwg. No.					
Supplier					
Supplier's Address 					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		2-2			
Test Requirements	10-20016	10-13-61	10-13-61	10-13-61	B. M. Dannon
Test Procedures		4-12			
Start Test		5-15-62			
Complete Test		7-15-62			
First Status Report*		6-15-62			
Final Report		8-15-62			
3. Summary of Tests Required					
Performance, Vibration, Shock, Acceleration					
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)					
5. Test Conducted by:					
Organization			Location		
6. Required Test Witnesses					
Organization					
7. Remarks					
 Vendor to be selected approx. 2-62					
		Date		1-5-62	
1-15-62					
*submitted monthly thereafter					
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1.1.4.4	QUALIFICATION TEST PLAN				1	
Program Element No.					Brief No.	
1. Item Tested      Hydrogen Cooling Equipment ~ Integrated Hydrogen Cooling and Secondary Power Subsystem Spec. & Dwg. No. (s)      10-20917 Used-On Dwg. No. Supplier      Airesearch Division of the Garrett Corporation Supplier's Address      Los Angeles, California Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan		6-1-62				
Test Requirements	10-20917		4-14-61	4-14-61	E.H. Donnan	
Test Procedures		7-1-62				
Start Test		8-1-62				
Complete Test		10-1-62				
First Status Report*		9-1-62				
Final Report		11-1-62				
3. Summary of Tests Required A simulated flight test of one hour duration shall be conducted on the assembled equipment for each of the following conditions: <div style="margin-left: 40px;">           Normal operation            Malfunction of one pump            Failed pilot's compartment            Failed equipment compartment            Failed APU cooler unit            Failed hydraulic cooler unit         </div>						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time) Liquid Hydrogen Facilities Hazardous Test Area						
5. Test Conducted by: Organization      Airesearch Div. of Garrett Corp.      Location      Los Angeles, California						
6. Required Test Witnesses Organization      One Boeing representative, if desired by BAC						
7. Remarks						
Date      8-14-61						
*submitted monthly thereafter 2-6/81-0-5		109		D2-5697-16 Vol. IV		Page 95

1.1.1.4	QUALIFICATION TEST PLAN		2	
Program Element No.			Brief No.	
1. Item Tested Check Valve, Glycol-Water				
Spec. & Dwg. No. (s) 10-81062				
Used-On Dwg. No.				
Supplier				
Supplier's Address				
Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submission Dates	Approval	
		Schedule Actual	Date	By
Test Plan				
Test Requirements	10-81062			
Test Procedures				
Start Test		5-15-62		
Complete Test		7-15-62		
First Status Report*		6-15-62		
Final Report		8-15-62		
3. Summary of Tests Required				
Leakage Internal Pressure: Working , Proof, Burst Opening Pressure Pressure Drop Endurance Vibration Shock Acceleration Performance				
2. CANCELLED - Incorporated into Test Brief No. 3, page 101				
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)				
5. Test Conducted by:		Location		
Organization				
6. Required Test Witnesses				
Organization				
7. Remarks				
		Date 1-3-62		
1-15-62		110		Page 36
*submitted monthly thereafter				
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1.1.4.4	QUALIFICATION TEST PLAN		3	
Program Element No.			Brief No.	
1. Item Tested Shut-Off Valve - Glycol-Water Mixture				
Spec. & Dwg. No. (s) 10-81021				
Used-On Dwg. No.				
Supplier <u>CANCELLED</u>				
Supplier's Address				
Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By
Test Plan				
Test Requirements	10-81021	2-15-62		
Test Procedures				
Start Test		4-15-62		
Complete Test		7-15-62		
First Status Report*		6-15-62		
Final Report		8-15-62		
3. Summary of Tests Required				
Internal Leakage				
Internal-to-External Leakage				
Internal Pressure: Working, Proof, Burst				
Vibration				
Shock				
Acceleration				
Performance				
Superseded by 10-81023, Service Panel Test Brief 7, page 93.1				
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)				
5. Test Conducted by:				
Organization		Location		
6. Required Test Witnesses				
Organization				
7. Remarks				
Date 8-15-62				



1.1.4.4	QUALIFICATION TEST PLAN				6	
Program Element No.					Brief No.	
1. Item Tested		Hydrogen Tankage Controls				
Spec. & Dwg. No. (s)		10-81018				
Used-On Dwg. No.						
Supplier		AiResearch Div., Garret Corp				
Supplier's Address		Los Angeles				
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan		6-1-62				
Test Requirements	10-81018	9-15-61	8-21-61			
Test Procedures		7-1-62				
Start Test		5-15-62				
Complete Test		7-15-62				
First Status Report*		6-15-62				
Final Report		8-15-62				
3. Summary of Tests Required						
Performance tests to demonstrate compliance with requirements.						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
Liquid Hydrogen						
Hazardous Test Area						
5. Test Conducted by:		AiResearch		Location Los Angeles		
Organization						
6. Required Test Witnesses						
Organization		Boeing				
7. Remarks						
		Date		1-3-62		
1-15-62		*submitted monthly thereafter		112		Page 98
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1.1.1.4 Program Element No.	<b>QUALIFICATION TEST PLAN</b>	7 Brief No.
1. Item Tested <div style="text-align: right; margin-right: 100px;">SERVICE PANEL</div> Spec. & Dwg. No. (s)      10-81028 Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number		
2. Schedule Summary		
Task	Reference Doc. No.	Submittal Dates Schedule   Actual
Test Plan		Approval Date      By
Test Requirements	10-81028	
Test Procedures		
Start Test		
Complete Test		
First Status Report*		
Final Report		
3. Summary of Tests Required  Internal Leakage Internal-To-External Leakage Internal Pressure: Working, Proof, Burst Vibration Shock Acceleration Performance		
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)		
5. Test Conducted by:      Vendor <div style="display: flex; justify-content: space-between;"> <span>Organization</span> <span>Location</span> </div>		
6. Required Test Witnesses Organization Environmental Control		
7. Remarks  <div style="margin-top: 20px;">  Expected release date January 19, 1962.         </div> <div style="text-align: right; margin-top: 20px;">Date 1-5-62</div>		
1-15-62 *submitted monthly thereafter 2-6181-0-3	<b>113</b>	D2-5697-16 Vol. IV Page 98.1

1.1.4.3		QUALIFICATION TEST PLAN		1	
Program Element No.				Brief No.	
1. Item Tested Cryogenic Tubing (Flex and Super Insulated)					
Spec. & Dwg. No. (s) 10-81022					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By	
Test Plan					
Test Requirements	10-81022	2-62			
Test Procedures					
Start Test		5-15-62			
Complete Test		7-15-62			
First Status Report*		6-15-62			
Final Report		8-15-62			
3. Summary of Tests Required					
Leakage					
Internal Pressure: Working, Proof, Burst					
Bend					
Vibration					
Shock					
Acceleration					
Pressure Drop, Insulation Test					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Liquid Hydrogen					
Liquid Oxygen					
Liquid Nitrogen					
5. Test Conducted by:					
Organization			Location		
6. Required Test Witnesses					
Organization					
7. Remarks					
Date: 3-62					
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Program Element No.		QUALIFICATION TEST PLAN		Brief No. 2	
1. Item Tested Quick Disconnect Couplings-Cryogenic					
Spec. & Dwg. No. (s) 10-20015					
Used-On Dwg. No.					
Supplier 					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		2-62			
Test Requirements	10-20015	9-22-61	10-13-61	10-13-61	E. J. Donnan
Test Procedures		3-62			
Start Test		5-15-62			
Complete Test		7-15-62			
First Status Report*		6-15-62			
Final Report		8-15-62			
3. Summary of Tests Required					
Leakage					
Internal Pressure: Working, Proof, Burst					
Pressure Drop					
Vibration					
Acceleration					
Shock					
Performance					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Liquid Hydrogen - Hazardous Test Area					
Liquid Oxygen					
Liquid Nitrogen					
5. Test Conducted by:					
Organization			Location		
6. Required Test Witnesses					
Organization					
7. Remarks					
 Vendor to be selected approx. 2-62					
Date 1-3-62					
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ENVIRONMENTAL CONTROL

1.1.4.8 Program Element No.		QUALIFICATION TEST PLAN		3 Brief No.	
1. Item Tested		Valves, Safety, Relief, Check, Shut-off, Cryogenic			
Spec. & Dwg. No. (s)		10-81020			
Used-On Dwg. No.					
Supplier					
Supplier's Address		[ ]			
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By	
Test Plan		2-62			
Test Requirements	10-81020	10-16-61		10-16-61	R. L. Dorman
Test Procedures		3-62			
Start Test		5-15-62			
Complete Test		7-15-62			
First Status Report*		6-15-62			
Final Report		8-15-62			
3. Summary of Tests Required					
Leakage					
Internal Pressure: Working, Proof, Burst					
Opening Pressure					
Reset Pressure					
Vibration					
Shock					
Acceleration					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Liquid Hydrogen					
Liquid Oxygen					
Liquid Nitrogen					
5. Test Conducted by:					
Organization			Location		
6. Required Test Witnesses					
Organization					
7. Remarks					
[ ] Vendor to be selected approx. 2-62					
1-15-62		Date		1-3-62	
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1.1.4.8	QUALIFICATION TEST PLAN				4	
Program Element No.					Brief No.	
1. Item Tested						
Injector Unit - Nitrogen						
Spec. & Dwg. No. (s)						
Used-On Dwg. No. 10-31030						
Supplier						
Supplier's Address 						
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan		8-12				
Test Requirements	10-31030	9-25-61	9-25-61	9-25-61	S. J. Thompson	
Test Procedures		9-12				
Start Test		9-15-62				
Complete Test		9-15-62				
First Status Report*		6-15-62				
Final Report		8-15-62				
3. Summary of Tests Required						
Leakage						
Internal Pressure: Working, Proof, Burst						
Cycling						
Performance						
Vibration						
Acceleration						
Shock						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
5. Test Conducted by:						
Organization				Location		
6. Required Test Witnesses						
Organization						
7. Remarks						
 Vendor to be selected approx. 2-62						
Date 1-3-62						
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1.1.4.8		QUALIFICATION TEST PLAN		5	
Program Element No.				Brief No.	
1. Item Tested		Tankage Instrumentation			
Spec. & Dwg. No. (s)		10-81019			
Used-On Dwg. No.					
Supplier					
Supplier's Address		11			
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		2-15-62			
Test Requirements	10-81019				
Test Procedures		11-9-61		11-9-61	E. M. Dorman
Start Test		2-15-62			
Complete Test		3-15-62			
First Status Report*		7-15-62			
Final Report		8-15-62			
3. Summary of Tests Required					
Performance					
Vibration					
Shock					
Acceleration					
Pressure (External)					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Liquid Hydrogen					
Liquid Oxygen					
Liquid Nitrogen					
5. Test Conducted by:					
Organization		Location			
6. Required Test Witnesses					
Organization					
7. Remarks					
11		Vendor to be selected approx 2-62			
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1.1.4.8

## QUALIFICATION TEST PLAN

6

Program Element No.

Brief No.

1. Item Tested Valves, Cryogenic, Shut-Off

Spec. &amp; Dwg. No. (s) 10-81021

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-81021				
Test Procedures					
Start Test		5-15-62			
Complete Test		7-15-62			
First Status Report*		8-15-62			
Final Report		8-15-62			

3. Summary of Tests Required

Internal & Internal to External Leakage  
Internal Pressure: Working, Proof, Burst  
Vibration  
Shock  
Acceleration  
Performance

CANCELLED - Incorporated into 10-81020,  
Test Brief #3, Page 101.

4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Liquid Hydrogen  
Liquid Oxygen  
Liquid Nitrogen

5. Test Conducted by:  
Organization

Location

6. Required Test Witnesses  
Organization

7. Remarks

Date 1-3-62

1-15-62




\*submitted monthly thereafter  
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CONFIGURATIONS

1.1.5.2	QUALIFICATION TEST PLAN		1
Program Element No.			Brief No.
1. Item Tested Secondary Power Bay Inflight Nitrogen Purge Secondary Subsystem			
Spec. & Dwg. No. (s) D2-0093- Tab. D			
Used-On Dwg. No.			
Supplier Boeing and 			
Supplier's Address			
Supplier's Part Number			
2. Schedule Summary			
Task	Reference Doc. No.	Submittal Dates Schedule Actual	Approval Date By
Test Plan	D2-0093- Tab. D	10-15-62	
Test Requirements	D2-0093- Tab. D	3-15-62	
Test Procedures	D2-0093- Tab. D	9-15-62	
Start Test		11-15-62	
Complete Test		6-15-63	
First Status Report*			
Final Report			
3. Summary of Tests Required			
<p>Tests required to assure adequacy of system to function properly under all possible conditions from sea level to 100,000 feet. Tests to be performed will include vibration, acoustical noise, altitude and equipment performance tests. The vibration and noise tests will be performed in conjunction with Integration Tests per D2-7924, Section 1.1.10.4, 1.6.2.2.2. and 3.7.</p> <p>The altitude and equipment performance tests will be performed in conjunction with integration tests per D2-7924, Section 1.1.10.6.</p> <p>The components will be qualified and therefore the above tests will qualify the supports, tubing and demonstrate the ability of the subsystem to function properly in the secondary power bay environment.</p>			
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)			
Glanders provided for Integration Tests shall be used. Altitude Chamber			
5. Test Conducted by: The Boeing Company Organization Location Seattle			
6. Required Test Witnesses Glider Configuration Organization			
7. Remarks			
These tests will be performed in conjunction with Integration Tests.			
 To be determined for components			
 To be determined.			
Date 1-11-62			
1-15-62 *submitted monthly thereafter 2-6/81-0-5		120	D2-5697-16 Vol. IV Page 105



1.1.3.2		QUALIFICATION TEST PLAN		2	
Program Element No.				Brief No.	
1. Item Tested		Nitrogen By-Pass Valve for Inflight Nitrogen Purge Secondary Subsystem			
Spec. & Dwg. No. (s)		B2-8098 Tab.D			
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		2-72			
Test Requirements	10-11-61	10-27-61	10-22-61		
Test Procedures		4-62			
Start Test		5-62			
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
Proof pressure test					
Environmental Conditions operating tests					
Environmental conditions non-operating tests					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
NONE					
5. Test Conducted by: Vendor (or Zeeing Co.)					
Organization			Location		
6. Required Test Witnesses Glider Configurations Unit					
Organization					
7. Remarks					
 Vendor to be selected approx. 3-62					
1-15-62		Date		1-3-62	
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CONFIGURATIONS

1.1.1.2		QUALIFICATION TEST PLAN		3	
Program Element No.				Brief No.	
1. Item Tested Nitrogen Heat Exchanger - Inflight Nitrogen Purge Secondary Sub-system.					
Spec. & Dwg. No. (s) D2-3098 Tab.D					
Used-On Dwg. No.					
Supplier					
Supplier's Address 					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		3-62			
Test Requirements	10-01063	10-27-61	12-22-61		
Test Procedures		4-62			
Start Test		6-62			
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
Proof pressure test					
Environmental conditions operating test					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
NONE					
5. Test Conducted by: The Boeing Co.					
Organization			Location		
6. Required Test Witnesses					
Organization			Glider Configurations Unit		
7. Remarks					
 Vendor to be selected approx. 3-62					
		Date		1-3-62	
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1.1.5.2

## QUALIFICATION TEST PLAN

4

Program Element No.

Brief No.

1. Item Tested Nitrogen Modulating Valve for Inflight Nitrogen Purge Secondary Subsystem

Spec. &amp; Dwg. No. (s)

D2-8098 Tab.D

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		3-62			
Test Requirements	D2-8098	10-22-61	12-22-61		
Test Procedures		3-62			
Start Test		6-62			
Complete Test					
First Status Report*					
Final Report					

## 3. Summary of Tests Required

Proof pressure test

Environmental Conditions operating test

Environmental conditions non-operating tests

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

NONE

5. Test Conducted by:  
Organization

Vendor (or Boeing Co.)

Location

6. Required Test Witnesses  
Organization

Glider Configurations Unit

## 7. Remarks



Vendor to be selected approx. 3-62

Date

1-3-62

1-15-62

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1.1.5.2		QUALIFICATION TEST PLAN		5	
Program Element No.				Brief No.	
1. Item Tested Nitrogen Shut-Off Valve for Inflight Nitrogen Purge Secondary Subsystem					
Spec. & Dwg. No. (s)		D2-8093 Tab.D			
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		3-62			
Test Requirements	10-02053	10-07-61	10-02-61		
Test Procedures		1-62			
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
Proof pressure test					
Environmental conditions operating tests					
Environmental conditions non-operating tests					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
NONE					
5. Test Conducted by: Vendor (or Boeing Co.)					
Organization		Location			
6. Required Test Witnesses					
Organization		Glider Configurations Unit			
7. Remarks					
Vendor to be selected approx. 3-62					
1-15-62		Date		1-3-62	
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1.1.5.2		QUALIFICATION TEST PLAN		6	
Program Element No.				Brief No.	
<b>1. Item Tested</b> Ground Nitrogen Purge Secondary Subsystem Spec. & Dwg. No. (s) D2-8098 tab A Used-On Dwg. No. Supplier Boeing Supplier's Address Supplier's Part Number					
<b>2. Schedule Summary</b>					
Task	Reference Doc. No.	Submitted Dates	Approval		
		Schedule Actual	Date	By	
Test Plan	D2-8098	10-15-62			
Test Requirements	D2-8098 Tab A	5-15-62			
Test Procedures	D2-8098	9-15-62			
Start Test		12-15-62			
Complete Test		2-15-63			
First Status Report*		12-15-62			
Final Report		7-15-63			
<b>3. Summary of Tests Required</b> <p>The subsystem will be subjected to Integration Vibration and noise tests per D2-7924, Section 1.1.10.4, 1.6.2.2.2 and 3.7. The subsystem will be operated during these tests.</p> <p>The subsystem will be subjected to an operations test in conjunction with Integration test per D2-7924, Section 1.1.10.5 and 2.3.</p> <p>The subsystem will be supplied with nitrogen from a ground source. The efficiency of the subsystem to inert the glider interior shall be tested, by means of oxygen detectors, and pressure sensors.</p>					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b> Ground Supply Gaseous Nitrogen					
<b>5. Test Conducted by:</b> Boeing Organization Location					
<b>6. Required Test Witnesses</b> Organization Glider Configuration					
<b>7. Remarks</b>  To be determined later.					
Date 1-11-62					
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1.1.5.3		QUALIFICATION TEST PLAN		2	
Program Element No.					Brief No.
1. Item Tested <b>Glider Air Purge Inlet</b>					
Spec. & Dwg. No. (s) <b>D2-8098 Tab. B</b>					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submital Dates		Approval	
		Schedule	Actual	Date	by
Test Plan		10-15-62			
Test Requirements	D2-8098 Tab. B	7-15-62			
Test Procedures		9-15-62			
Start Test		11-15-62			
Complete Test		6-15-63			
First Status Report*					
Final Report		7-15-63			
3. Summary of Tests Required					
Environmental conditions operating tests.					
Environmental conditions non-operating tests.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
None					
5. Test Conducted by: <b>Boeing</b>					
Organization			Location		
6. Required Test Witnesses					
Organization					
7. Remarks					
Date <b>1-11-62</b>					
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1.1.5.4

## QUALIFICATION TEST PLAN

Program Element No.

1

Brief No.

## 1. Item Tested

Overheat Detecting System

Spec. &amp; Dwg. No. (s) 10-81112

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-81112	4-3-62			
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

## 3. Summary of Tests Required

The Overheat Detecting System will be qualification tested per the requirements of SCD 10-81112.

A summary of the test is as follows:

Performance - calibration

Environment

Dielectric

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

## 5. Test Conducted by:

Organization

Location

Supplier

## 6. Required Test Witnesses

Organization

## 7. Remarks



Vendor selection anticipated by 3-1-62.

Date

12-28-61

1-15-62

\*submitted monthly thereafter  
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WIRING DEV. & DIAG.

1.1.5.2		QUALIFICATION TEST PLAN				Brief No.	
Program Element No.							
1. Item Tested Cockpit Lighting Assembly							
Spec. & Dwg. No. (s)		Deleted - To be qualified as a standard and included in EAC Standards Book 31 by Physics Technology. Ref. - Coord Sheet MI-W-102, dated Dec. 8, 1961.					
Used-On Dwg. No.							
Supplier							
Supplier's Address							
Supplier's Part Number							
2. Schedule Summary							
Task		Reference Doc. No.	Submittal Dates**		Approval		
			Schedule	Actual	Date	By	
Test Plan							
Test Requirements							
Test Procedures							
Start Test							
Complete Test							
First Status Report*							
Final Report							
3. Summary of Tests Required							
Cockpit Lighting Assembly will be qualification tested per the requirements of							
A summary of the test is as follows:							
Performance							
Environment							
Life							
Explosion Proof							
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)							
5. Test Conducted by:							
Organization				Location			
Supplier							
6. Required Test Witnesses							
Organization							
7. Remarks							
Date 8-11-61							
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*submitted monthly thereafter 2-6181-0-5							

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x2



1.1.3.5 Program Element No.	<b>QUALIFICATION TEST PLAN</b>	1 Brief No.
1. Item Tested <span style="float: right;">Air Speed and Mach Number Indicator</span> Spec. & Dwg. No. (s) <span style="float: right;">Anticipated to be off-the-shelf item</span> Used-On Dwg. No. <span style="float: right;"></span> Supplier Supplier's Address Supplier's Part Number		
2. Schedule Summary		
Task	Reference Doc. No.	Submittal Dates Schedule    Actual    Date    By
Test Plan		
Test Requirements	na-00055	
Test Procedures		
Start Test		
Complete Test		
First Status Report*		
Final Report		
3. Summary of Tests Required  It is anticipated that this item will be a fully qualified off-the-shelf part, with no additional testing required.		
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)  None		
5. Test Conducted by: <div style="display: flex; justify-content: space-between;"> <span>Organization</span> <span>Location</span> </div>		
6. Required Test Witnesses Organization		
7. Remarks  <div style="display: flex; align-items: center;">          General requirements spec.       </div>		
Date 1-11-62		
1-15-62 *submitted monthly thereafter 2-6191-0-5	<b>129</b>	D2-5697-16 Vol. IV Page 114

CONTROL &amp; DESIGN

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## QUALIFICATION TEST PLAN

Program Element No.

Brief No.

## 1. Item Tested

Barometric Altimeter

Spec. &amp; Dwg. No. (s)

Anticipated to be off-the-shelf item.

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	TR-30055 1				
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

## 3. Summary of Tests Required

It is anticipated that this item will be a fully qualified off-the-shelf part, with no additional testing required.

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

None

5. Test Conducted by:  
Organization

Location

6. Required Test Witnesses  
Organization

## 7. Remarks

1 General requirements spec.

Date 1-11-62

1-15-62

\*submitted monthly thereafter

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1.1.6.5		QUALIFICATION TEST PLAN		3	
Program Element No.			Brief No.		
1. Item Tested <b>Eleven Position Indicator</b>					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	12-8055				
Test Procedures					
Start Test					
Complete Test		5-1-62			
Final Status Report*		5-30-62			
Final Report					
3. Summary of Tests Required					
The following tests, either singularly, or in logical combination will be required:					
1. Vibration					
2. Explosion Proofing					
3. Life					
4. Performance					
5. Shock					
6. Thermal Environment					
7. Dielectric					
8. Acceleration					
9. Zero Gravity					
10. Humidity					
11. Acoustic Environment					
12. Pressure					
13. Explosive Decomp.					
14. Radiation					
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)					
None					
5. Test Conducted by:					
Organization			Location		
6. Required Test Witnesses					
Organization					
7. Remarks					
Date 1-11-62					
1-15-62		131		D2-5697-16	
*submitted monthly thereafter				Vol. IV	
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<div style="border: 1px solid black; padding: 2px;">1.1.6.5</div> <div style="border: 1px solid black; padding: 2px;">Program Element No.</div>	<div style="border: 1px solid black; padding: 2px; font-weight: bold;">QUALIFICATION TEST PLAN</div>	<div style="border: 1px solid black; padding: 2px;">3.1</div> <div style="border: 1px solid black; padding: 2px;">Brief No.</div>																																																				
<b>1. Item Tested</b> Rudder Position Indicator  Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number																																																						
<b>2. Schedule Summary</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th rowspan="2" style="width: 30%;">Task</th> <th rowspan="2" style="width: 20%;">Reference Doc. No.</th> <th colspan="2" style="width: 20%;">Submital Dates</th> <th colspan="2" style="width: 20%;">Approval</th> </tr> <tr> <th style="width: 10%;">Schedule</th> <th style="width: 10%;">Actual</th> <th style="width: 10%;">Date</th> <th style="width: 10%;">By</th> </tr> </thead> <tbody> <tr> <td>Test Plan</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Test Requirements</td> <td>D2-80055</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Test Procedures</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Start Test</td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Complete Test</td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>First Status Report*</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Final Report</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Task	Reference Doc. No.	Submital Dates		Approval		Schedule	Actual	Date	By	Test Plan						Test Requirements	D2-80055					Test Procedures						Start Test						Complete Test						First Status Report*						Final Report					
Task	Reference Doc. No.	Submital Dates			Approval																																																	
		Schedule	Actual	Date	By																																																	
Test Plan																																																						
Test Requirements	D2-80055																																																					
Test Procedures																																																						
Start Test																																																						
Complete Test																																																						
First Status Report*																																																						
Final Report																																																						
<b>3. Summary of Tests Required</b>  The following tests, either singularly, or in logical combination will be required: <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 50%;">1. Vibration</td> <td style="width: 50%;">8. Acceleration</td> </tr> <tr> <td>2. Explosion Proofing</td> <td>9. Zero Gravity</td> </tr> <tr> <td>3. Life</td> <td>10. Humidity</td> </tr> <tr> <td>4. Performance</td> <td>11. Acoustic Environment</td> </tr> <tr> <td>5. Shock</td> <td>12. Pressure</td> </tr> <tr> <td>6. Thermal Environment</td> <td>13. Explosive Decomp.</td> </tr> <tr> <td>7. Dielectric</td> <td>14. Radiation</td> </tr> </table>			1. Vibration	8. Acceleration	2. Explosion Proofing	9. Zero Gravity	3. Life	10. Humidity	4. Performance	11. Acoustic Environment	5. Shock	12. Pressure	6. Thermal Environment	13. Explosive Decomp.	7. Dielectric	14. Radiation																																						
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4. Performance	11. Acoustic Environment																																																					
5. Shock	12. Pressure																																																					
6. Thermal Environment	13. Explosive Decomp.																																																					
7. Dielectric	14. Radiation																																																					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>  None																																																						
<b>5. Test Conducted by:</b> <div style="display: flex; justify-content: space-between;"> <span>Organization</span> <span>Location</span> </div>																																																						
<b>6. Required Test Witnesses</b> Organization																																																						
<b>7. Remarks</b>																																																						
Date 1-11-62																																																						
1-15-62 *submitted monthly thereafter 2-18-62	132	D2-5697-16 Vol. IV Page 116.1																																																				

1.1.G.5		QUALIFICATION TEST PLAN		Brief No.	
Program Element No.					
1. Item Tested <b>Elapsed Time Indicator</b>					
Spec. & Dwg. No. (s)		Anticipated to be off-the-shelf item			
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	D2-50055 				
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
It is anticipated that this item will be a fully qualified off-the-shelf part, with no additional testing required.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
None					
5. Test Conducted by:		Location			
Organization					
6. Required Test Witnesses					
Organization					
7. Remarks					
 General requirements spec.					
1-15-62		Date 1-11-62			
*submitted monthly thereafter		133		D2-5697-16	
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WIRING DEV. & DIAG.

1.1.6.5		<b>QUALIFICATION TEST PLAN</b>		5	
Program Element No.				Brief No.	
1. Item Tested		Position Indicators			
Spec. & Dwg. No. (s)		Deleted - to be qualified as standards and included in BMC Standards Book 31 by Hydrex Technology. Ref - Coord Sheet EL-W-102, dated Dec. 8, 1961.			
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task		Reference Doc. No.	Submittal Dates		Approval
			Schedule	Actual	Date
Test Plan					
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
The Position Indicators will be qualification tested per the requirements of A summary of the tests is as follows:					
Performance Environment Life Dielectric Explosion proof					
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)					
5. Test Conducted by:					
Organization			Location		
Supplier					
6. Required Test Witnesses					
Organization					
7. Remarks					
			Date 8-11-61		
1-15-62 *submitted monthly thereafter 2-6181-0-5			<b>134</b>		D2-5697-16 Vol. IV
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1-15-62



Brief No.

### Normal Accelerometer

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	12-10055				
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report		2-27-68			

### 3. Summary of Tests Required

It is anticipated that this will be a fully qualified off-the-shelf part, with no additional testing required.

4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

None

**5. Test Conducted by:**  
**Organization**

## Location

## 6. Required Test Witnesses

### 7. Remarks

1 General requirements spec.

Date 1-11-62

1-15-62

\*submitted monthly thereafter  
2-6181-0-5

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## CONTROLS & DISPLAYS

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1.1.6.5		QUALIFICATION TEST PLAN		7	
Program Element No.			Brief No.		
1. Item Tested LAND SKIDS EXTEND CONTROL					
Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By	
Test Plan					
Test Requirements					
Test Procedures					
Start Test			2-22-62		
Complete Test			3-30-62		
First Status Report*					
Final Report					
3. Summary of Tests Required  All tests required are specified in the landing skids extend switch source control drawing (TO BE DETERMINED)					
<i>No qualification required. Functional test after installation only.</i>					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)  NONE					
5. Test Conducted by: Organization  Location					
6. Required Test Witnesses Organization					
7. Remarks					
Date : 1-3-62					
1-15-62 *submitted monthly thereafter 2-6181-0-5		136		D2-5697-16 Vol. IV Page 12	

**Brief No.**

### Cabin Pressure Gauge

Anticipated to be off-the-shelf item

**Supplier****Supplier's Address**

Supplier's Part Number

## 2. Schedule Summary

### 3. Summary of Tests Required

It is anticipated that this will be a fully qualified off-the-shelf part, with no additional testing required.

4. Special Facilities and/or Test Equipment (Include Estimated Load Time)

**Note**

**5. Test Conducted by:**  
**Organization**

### Location

### 6. Required Test Witnesses

7. Remarks

1 General requirements spec.

Date 1-11-62

1-13-62

\*submitted monthly thereafter  
2-6-3-0-5

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WIRING DEV. & DIAG.

1.1.6.5		QUALIFICATION TEST PLAN		G.	
Program Element No.		Brief No.			
1. Item Tested		Control switches			
Spec. & Dwg. No. (s)		Deleted - to be qualified as standards and included in BAC Standards Book 31 by Physics Technology. Ref - Coord Sheet ML-N-102, dated Dec. 8, 1961.			
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task		Reference Doc. No.	Submittal Dates		Approval
			Schedule	Actual	Date By
Test Plan					
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
The control switches will be qualification tested per the requirements of (TO BE DETERMINED). A summary of the tests is as follows:					
Performance					
Environment					
Life					
Dielectric					
Explosion proof					
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)					
5. Test Conducted by:					
Organization			Location		
Supplier					
6. Required Test Witnesses					
Organization					
7. Remarks					
			Date 8-11-61		
1-15-62 *submitted monthly thereafter 2-6181-0-5			138		D2-5697-16 Vol. IV
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WIRING DEV. & DIAG.

2.1.5.5		QUALIFICATION TEST PLAN			
Program Element No.			Brief No.		
1. Item Tested      Warning lights					
Spec. & Dwg. No. (s)			Deleted - to be qualified as standards		
Used-On Dwg. No.			and included in BAC Standards Book 31		
Supplier			by Physics Technology. Ref - Coord		
Supplier's Address			Sheet BL-W-102, dated Dec. 8, 1961.		
Supplier's Part Number					
2. Schedule Summary					
Task		Reference Dcc. No.	Submittal Dates**		Approval
			Schedule	Actual	Date
Test Plan					
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
The Warning Lights will be qualification tested per the requirements of (TO BE DETERMINED)					
A summary of the tests is as follows:					
Performance					
Environment					
Life					
Dielectric					
Explosion proof					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization			Location		
Supplier					
6. Required Test Witnesses					
Organization					
7. Remarks					
			Date      8-11-61		
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1.1.6.5

## QUALIFICATION TEST PLAN

11

Program Element No.

Brief No.

## 1. Item Tested

Annunciator Panel

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	by
Test Plan					
Test Requirements		3-27-62			
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

## 3. Summary of Tests Required

The Annunciator Panel will be qualification tested per the requirements of  
(TO BE DETERMINED)

A summary of the tests is as follows:

Performance

Environment

Dielectric

Explosion Proof

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

## 5. Test Conducted by:

Organization

Location

Supplier

## 6. Required Test Witnesses

Organization

## 7. Remarks



Vendor selection anticipated by 5-1-62.

Date 12-28-61

1-15-62

\*submitted monthly thereafter

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1.1.6.6		QUALIFICATION TEST PLAN		1	
Program Element No.				Brief No.	
1. Item Tested					
Pilot's Sidearm Control					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	This Sheet				
Test Requirements	D2-8130				
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report			3-1-63		
3. Summary of Tests Required					
No. Test articles					
1. Performance tests					
2. Vibration tests D-S requirements					
3. MIL-E-5272C - only as applicable					
4. Reliability tests (no tests as such, records of time and failures are to be kept during development and qualification tests.)					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization			Location		
6. Required Test Witnesses					
Organization					
7. Remarks					
Preliminary Information only					
Date 8-14-61					
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1.2.6.6	QUALIFICATION TEST PLAN				2	
Program Element No.					Brief No.	
1. Item Tested Rudder Pedals Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan	This Test					
Test Requirements	D2-8130					
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report		3-1-63				
3. Summary of Tests Required						
No. Test Articles 1. Performance Tests 2. Vibration Tests D-S requirements 3. MIL-E-5272C - only as applicable 4. Reliability Tests (No tests as such, records of time and failures are to be kept during development and qualification tests).						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
5. Test Conducted by:						
Organization				Location		
6. Required Test Witnesses						
Organization						
7. Remarks						
Preliminary information only						
Date 8/14/61						
*submitted monthly thereafter 2-6181-0-5		142		D2-5697-16 Vol. IV		Page 126



CREW ACCOMMO & ESCAPE

1.1.6.6	QUALIFICATION TEST PLAN				3	
Program Element No.					Brief No.	
1. Item Tested						
Pilot Operated Glider Abort Initiation Control						
Spec. & Dwg. No. (s)						
Used-On Dwg. No.						
Supplier						
Supplier's Address						
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan						
Test Requirements						
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report						
3. Summary of Tests Required						
Pilot Station Integration tests will provide qualification of the physical aspects of the control (D2-5697-16, Volume VI, Section 1.1.10.7). All other qualification will be by similarity.						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
5. Test Conducted by:						
Organization				Location		
6. Required Test Witnesses						
Organization						
7. Remarks						
Date 8-31-61						
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CREW ACCOMMO &amp; ESCAPE

1.1.6.6	QUALIFICATION TEST PLAN				Brief No.	
Program Element No.						
1. Item Tested SPEED BRAKE CONTROL SWITCH Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates Schedule Actual		Approval Date By		
Test Plan						
Test Requirements						
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report						
3. Summary of Tests Required  Pilot Station Integration tests will provide qualification of the physical aspects of the control switch (D2-5697-16, Volume VI, Section 1.1.10.7). All other qualification will be by similarity.						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
5. Test Conducted by: Organization Location						
6. Required Test Witnesses Organization						
7. Remarks						
Date 8-31-61						
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1.1.6.6		QUALIFICATION TEST PLAN		5	
Program Element No.				Brief No.	
1. Item Tested Transducers - Pilot's Controls					
Spec. & Dwg. No. (s) 10- 81035					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates as Schedule Actual		Approval Date By	
Test Plan					
Test Requirements	10-81035				
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report		8-1-61			
3. Summary of Tests Required					
1. Performance					
2. Acceleration (linear)					
3. MIL-E-5272C - only as applicable					
4. Vibration test D-S requirements					
Reliability (no test as such. Time and failure records will be made during development and qualification testing.)					
To be qualified in conjunction with sidestick control and the rudder pedals.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization			Location		
6. Required Test Witnesses					
Organization					
7. Remarks					
Preliminary information					
Date 8-14-61					
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1.1.10.2	QUALIFICATION TEST PLAN		1		
Program Element No.			Brief No.		
1. Item Tested					
AEROTIC SEAT AND SURVIVAL SYSTEM					
Spec. & Dwg. No. (s)	10-61000 (Source Control Drawing)				
Used-On Dwg. No.					
Supplier	Heber Aircraft Corp.				
Supplier's Address	Burbank, California				
Supplier's Part Number	SCH-01, 2, 3, 4 - 600				
2. Schedule Summary					
Task	Reference Doc. No.	Submitted Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		5-24-61	5-24-61		
Test Requirements	10-61000	6-5-61	6-5-61		
Test Procedures		2-1-62			
Start Test		6-24-62			
Complete Test		7-15-62			
First Status Report*		7-15-62			
Final Report		6-30-62			
3. Summary of Tests Required					
1. Structural test to design loads. 2. Functional qualification will result from special functional tests and integration tests (outline in D2-5097-16, Vol. VI, Section 1.1.10.2.2). 3. Environmental qualification will be limited to a few components as will be reflected in the seat vendor test procedures					
4. Special Facilities and/or Test Equipment (Include Estimated Load Time)					
5. Test Conducted by:					
Organization		Location			
Heber Aircraft		Burbank, California			
6. Required Test Witnesses					
Organization					
Boeing Engineering					
7. Remarks					
Date 1-5-62					
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1.1.0.2		QUALIFICATION TEST PLAN		1	
Program Element No.		Brief No.			
1. Item Tested PERSONNEL PROTECTION SYSTEM (PILOT SUIT) (Qualification is A.F. 115000 SILENT)					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
<p>This suit is an off-the-shelf item furnished by the AF. It has been qualified in the X-15 Program. The suit will be required as part of the test setup in the following Design Integration Tests: (Reference document D2-5697-16, Vol. VI) (1) Crew Station Simulator Tests, para. I.1.2, (2) Escape System (Sled) Tests, para. I.1.5.</p>					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization			Location		
6. Required Test Witnesses					
Organization					
7. Remarks					
Date 1-3-62					
1-15-62		147		D2-5697-16 Vol. IV	
*submitted monthly thereafter 2-61-0-5				Page 131	

## QUALIFICATION TEST PLAN

Program Element No.

Brief No.

1. Item Tested GLIDER/ECOSTER TRANSITION SECTION

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier

The Boeing Company

Supplier's Address

Seattle, Washington

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	D2-5697-16, Vol. VI				
Test Requirements	D2-7024				
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

3. Summary of Tests Required

- 1) Qualification of the Transition Section will be achieved by the Acceleration Rocket Staging Test in accordance with [REDACTED] document D2-5697-16, Vol. VI, "Design Integration Test Plan."
- 2) Structural Qualification of the Transition Section will be achieved by Structural Verification Tests in accordance with Document D2-5697-16, Vol. VII.

4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Special facility requirements will be provided for in conjunction with the test referred to in Item 3 above.

5. Test Conducted by:

Organization The Boeing Company

Location (Not yet determined)

6. Required Test Witnesses

Organization The Boeing Company

7. Remarks

Date

12-26-61

1-15-62

\*submitted monthly thereafter

2-6181-0-5

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TRANSITION

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Transition

1.1.9.1		QUALIFICATION TEST PLAN		1	
Program Element No.				Brief No.	
<p>1. Item Tested <b>Blast Port Cover Latching and Tension Regulation Mechanism</b></p> <p>Spec. &amp; Dwg. No. (s)          Used-On Dwg. No.          Supplier          Supplier's Address <b>The Boeing Company</b>  <b>Seattle, Washington</b>          Supplier's Part Number</p>					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	D2-5697-16				
Test Requirements	D2-7924				
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
<p>1) Qualification of the functional capability of these items is intended to be accomplished in the course of the Acceleration Rocket Staging Tests per paragraph 1.1.10.3 of Document D2-5697-16, Vol. VI.</p> <p>2) Qualification under the following environmental conditions:</p> <p style="padding-left: 40px;">Heating (Full range of operating temperatures)          Vibration and Shock</p> <p>These tests are intended to be accomplished in the course of the Blast Port Cover Tests (Design Development Tests) ref. document D2-5697-16, Vol. II, paragraph (to be inserted when available).</p>					
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)					
<p>Special facility requirements will be provided for in conjunction with the Acceleration Rocket Staging Test referred to in 1) above.</p>					
5. Test Conducted by:					
Organization		The Boeing Company		Location 1) <b>Edinburg, Wash.</b> 2) <b>Seattle, Wash.</b>	
6. Required Test Witnesses					
Organization		The Boeing Company			
7. Remarks					
<p>Changes to this test brief are anticipated as a result of Titan III redirection.</p>					
		Date		12-21-61	
1-15-62		149		D2-5697-16 Vol. IV	
*submitted monthly thereafter 2-6181-C-5				Page 133	

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1.1.9.1		QUALIFICATION TEST PLAN		2	
Program Element No.				Brief No.	
1. Item Tested <b>BLAST PORT COVER FASTENER ASSEMBLY</b>					
Spec. & Dwg. No. (s) 10-81040-2					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		8-18-62			
Test Requirements	10-81040-2	5-18-62			
Test Procedures		11-1-62			
Start Test		1-1-63			
Complete Test		3-1-63			
First Status Report*		2-1-63			
Final Report		4-1-63			
3. Summary of Tests Required					
The following tests are required:					
Functional					
Electrical Resistance and Dielectric Tests					
All Fire/No Fire Limits					
Sensitivity					
Firing Times					
Environmental, (Temperature, Altitude)					
Additional information toward this tabulation will be indicated as it becomes available.					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Vendor		Location	
6. Required Test Witnesses					
Organization		Engineering			
7. Remarks					
* Source Control Drawing Release Date					
Date		12-21-62			
1-15-62		*submitted monthly thereafter		150	
2-6181-0-5				D2-5697-16 Vol. IV	
				Page 134	

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1.1.9.2

## QUALIFICATION TEST PLAN

I.

Program Element No.

Brief No.

## 1. Item Tested

Transition/Booster Separation Subsystem

Spec. &amp; Dwg. No. (s)

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	by
Test Plan	D2-5697-16, Vol. VI				
Test Requirements	D2-7924				
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

## 3. Summary of Tests Required

The components involved in separating the booster from the glider-booster transition section, when operating together in a staging sequence, will be qualified by virtue of the "Flight Quality" Integration Tests outlined in document D2-7924 under title "Acceleration Rocket Staging Tests".

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Special facility requirements will be provided for in conjunction with test referred to in Item 3 above.

5. Test Conducted by: Boeing  
Organization

Location Tulalip

6. Required Test Witnesses  
Organization  
Boeing

## 7. Remarks

Date: 8/14/61

\*submitted monthly thereafter  
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1.1.9.2	QUALIFICATION TEST PLAN		2
Program Element No.			Brief No.
1. Item Tested ARM - DISARM DEVICE (TRANSITION/BOOSTER AND GLIDER/TRANSITION SEPARATION) Spec. & Dwg. No. (s) 10-S1103 Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number			
2. Schedule Summary			
Task	Reference Doc. No.	Submittal Dates Schedule Actual	Approval Date By
Test Plan		9-17-52	
Test Requirements	10-G1108	7-2-52	
Test Procedures		11-2-52	
Start Test		1-2-53	
Complete Test		3-2-53	
First Status Report*		3-3-53	
Final Report		4-2-53	
3. Summary of Tests Required			
Resistance Dielectric strength Insulation resistance Vibration Temperature-Altitude-Humidity Mechanical Strength Impact Tests			
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)			
Vendor Facilities			
5. Test Conducted by:			
Organization	Vendor	Location	
6. Required Test Witnesses			
Organization	The Boeing Company		
7. Remarks			
* Source Control Drawing Release Date			
Date 12-21-61			
1-15-62	152		D2-5697-16 Vol. IV
*submitted monthly thereafter 2-6181-0-5			Page 135

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1.1.1.0.2

## QUALIFICATION TEST PLAN

3

Program Element No.

Brief No.

1. Item Tested ELECTRICAL STAGING CONNECTOR

Spec. &amp; Dwg. No. (s) 10-81060

Used-On Dwg. No.

Supplier

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan					
Test Requirements	10-81060				
Test Procedures					
Start Test		1 Jun 62			
Complete Test		1 Sep 62			
First Status Report*					
Final Report					

## 3. Summary of Tests Required

Resistance (Contact)  
 Dielectric strength  
 Insulation resistance  
 Vibration  
 Temperature-Altitude-Humidity  
 Mechanical strength and operation  
 Moisture and fluid resistance  
 Engagement and disengagement forces

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

## 5. Test Conducted by:

Organization

Subcontractor

Location

## 6. Required Test Witnesses

Organization

The Boeing Company

## 7. Remarks



Vendor proposal review scheduled for 2-15-62.

Date

12-21-61

1-15-62

\*submitted monthly thereafter

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TRANSITION

1.1.9.2		QUALIFICATION TEST PLAN		4	
Program Element No.				Brief No.	
1. Item Tested		<p style="text-align: center;"><b>STRUCTURAL SEPARATION FASTENER (TRANSITION)</b></p> <p style="text-align: center;">The qualification of this item is now included in Test Brief 7, page 141.</p>			
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier					
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task		Reference Doc. No.	Submittal Dates		Approval
			Schedule	Actual	Date By
Test Plan					
Test Requirements					
Test Procedures					
Start Test					
Complete Test			1 May 52		
First Status Report*			1 Aug 52		
Final Report					
3. Summary of Tests Required					
Resistance Dielectric strength Insulation resistance Electrostatic discharge Sensitivity No-fire All-fire Firing time Hazard impact Vibration Temperature-Altitude-Humidity					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization		Subcontractor		Location	
6. Required Test Witnesses					
Organization		The Boeing Company			
7. Remarks					
			Date 8-10-51		
1-15-62					
*submitted monthly thereafter					
2-6101-0-5					
			154		
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Transition

R

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1.1.9.2	QUALIFICATION TEST PLAN		5	
Program Element No.			Brief No.	
1. Item Tested Glider/Transition Separation Subsystem				
Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submital Dates Schedule Actual		Approval Date by
Test Plan		4-15-62	5-31-61	
Test Requirements		5-1-62		
Test Procedures		5-1-62		
Start Test		5-1-62		
Complete Test		8-1-62		
First Status Report*		7-1-62		
Final Report		9-1-62		
3. Summary of Tests Required				
The testing of this subsystem (thrusters, release devices, initiators and separation controls) will be in conjunction with the acceleration rocket motor tests. Test separation of transition section under varying simulated conditions including full and empty acceleration rocket and unsymmetrical aerodynamic loads.				
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)				
The facilities being provided will be used for testing the glider/transition separation subsystem.				
5. Test Conducted by:				
Organization	Boeing	Location		
6. Required Test Witnesses				
Organization	Propulsion and Ordnance	Group 2-6134-4		
7. Remarks				
		Date	12-26-61	
1-15-62 *submitted monthly thereafter 2-6181-0-5		155		Page 139 D2-5697-16 Vol. IV

R

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Document No.

# QUALIFICATION TEST PLAN

Brief No.

Position Separation - Arm/Disarm Device  
(s) 10-

The qualification of this item is now included in Test Brief No. 2, page 136.

Press  
Part Number  
Title Summary

PNEUMATICS

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		1-2-62			
Test Requirements	10-	12-1-61			
Test Procedures		5-1-62			
Start Test		7-2-62			
Complete Test		8-3-62			
First Status Report*		8-1-62			
Final Report		10-1-62			

## 3. Summary of Tests Required

Performance Tests  
Environmental Tests

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Vendor facilities

5. Test Conducted by:  
Organization

Vendor

Location

6. Required Test Witnesses

Organization

Engineering

7. Remarks

\*Source control drawing release date.

1-15-62

\*submitted monthly thereafter  
2-6181-0-5

Date 8-14-61

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1.1.9.2	QUALIFICATION TEST PLAN				7	
Program Element No.					Brief No.	
1. Item Tested <b>STAGING FASTENER ASSEMBLY</b>						
Spec. & Dwg. No. (s) 10-81040-1 Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	by	
Test Plan		6-6-52				
Test Requirements	10-81040	3-22-52				
Test Procedures		7-22-52				
Start Test		9-22-52				
Complete Test		11-22-52				
First Status Report*		10-22-52				
Final Report		12-22-52				
3. Summary of Tests Required						
Performance Tests Environmental Tests						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
Vendor facilities						
5. Test Conducted by:						
Organization		Vendor		Location		
6. Required Test Witnesses						
Organization		Engineering				
7. Remarks						
Includes Booster/Transition and Glider/Transition						
* Source control drawing release date						
				Date	12-21-61	
1-15-52 *submitted monthly thereafter 2-6-61-5		<b>157</b>		D2-5697-16 Vol. IV	Page 141	

1.1.9.2	QUALIFICATION TEST PLAN		8	
Program Element No.			Brief No.	
1. Item Tested <b>Glider/Transition Thruster Assembly</b>				
Spec. & Dwg. No. (s) 10- -2				
Used-On Dwg. No.				
Supplier				
Supplier's Address				
Supplier's Part Number				
2. Schedule Summary				
Task	Reference Doc. No.	Submital Dates Schedule Actual		Approval Date By
Test Plan		9-17-62		
Test Requirements	10- -2	7-2-62		
Test Procedures		11-2-62		
Start Test		1-2-63		
Complete Test		3-2-63		
First Status Report*		2-2-63		
Final Report		4-2-63		
3. Summary of Tests Required				
Performance Tests				
Environmental Tests				
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)				
Vendor facilities				
5. Test Conducted by:				
Organization	Vendor	Location		
6. Required Test Witnesses				
Organization	Engineering			
7. Remarks* Source control drawing release date.				
Date 12-21-61				
1-15-62	*submitted monthly thereafter		158	Page 142
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TRANSITION

1.1.9.5	QUALIFICATION TEST PLAN		1
Program Element No.			Brief No.
1. Item Tested Transition Section External Insulation			
Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier Supplier's Address Supplier's Part Number			
The Boeing Company Seattle, Washington			
2. Schedule Summary			
Task	Reference Doc. No.	Submittal Dates Schedule Actual	Approval Date By
Test Plan			
Test Requirements			
Test Procedures			
Start Test		7-1-52	
Complete Test		11-7-52	
First Status Report*		9-1-52	
Final Report		12-1-52	
3. Summary of Tests Required Skin Panel Vibration Test of Insulation Adhesion Skin Panel Shear and Compression/Wrinkle Test of Insulation Environmental Compatibility Tests Moisture Solar Radiation Corrosive Gases and Liquids from Glider and Booster  Part or all of the above tests may be accomplished in the course of Design Development Tests. Additional information to be inserted when available.			
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)			
5. Test Conducted by: Organization The Boeing Company Location Seattle, Washington			
6. Required Test Witnesses Organization The Boeing Company			
7. Remarks  Changes to this test brief are anticipated as a result of Titan III re-direction.			
Date 12/27/51			
1-15-62 *submitted monthly thereafter 2-6-62-0-5		159	D2-5697-16 Vol. IV Page

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1.2.0	<b>QUALIFICATION TEST PLAN</b>		2																																																				
Program Element No.			Brief No.																																																				
<b>1. Item Tested</b> <div style="text-align: right; margin-right: 50px;">2003TER</div> Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier                      The Martin Company Supplier's Address      Baltimore, Maryland Supplier's Part Number																																																							
<b>2. Schedule Summary</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Task</th> <th rowspan="2">Reference Doc. No.</th> <th colspan="2">Submitted Dates</th> <th colspan="2">Approval</th> </tr> <tr> <th>Schedule</th> <th>Actual</th> <th>Date</th> <th>By</th> </tr> </thead> <tbody> <tr><td>Test Plan</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Test Requirements</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Test Procedures</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Start Test</td><td style="background-color: #cccccc;"></td><td></td><td></td><td style="background-color: #cccccc;"></td><td style="background-color: #cccccc;"></td></tr> <tr><td>Complete Test</td><td style="background-color: #cccccc;"></td><td></td><td></td><td style="background-color: #cccccc;"></td><td style="background-color: #cccccc;"></td></tr> <tr><td>First Status Report*</td><td></td><td></td><td></td><td style="background-color: #cccccc;"></td><td style="background-color: #cccccc;"></td></tr> <tr><td>Final Report</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>				Task	Reference Doc. No.	Submitted Dates		Approval		Schedule	Actual	Date	By	Test Plan						Test Requirements						Test Procedures						Start Test						Complete Test						First Status Report*						Final Report					
Task	Reference Doc. No.	Submitted Dates				Approval																																																	
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First Status Report*																																																							
Final Report																																																							
<b>3. Summary of Tests Required</b>																																																							
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>																																																							
<b>5. Test Conducted by:</b> <div style="display: flex; justify-content: space-between;"> <span>Organization</span> <span>Location</span> </div>																																																							
<b>6. Required Test Witnesses</b> <div style="text-align: center;">Organization</div>																																																							
<b>7. Remarks</b> <div style="margin-top: 10px;"> The associate contractor, The Martin Company, is conducting qualification tests in this area. Test planning will not be added. </div>																																																							
		Date	12-26-61																																																				
144 1-15-62 <small>*submitted monthly thereafter</small> 2-61-0-5	<b>160</b>	D2-5697-16 Vol. IV	Page 144																																																				


1.3.1.2	<b>QUALIFICATION TEST PLAN</b>		1																																																					
Program Element No.				Brief No.																																																				
<b>1. Item Tested</b> <div style="text-align: center; margin-top: 10px;"><b>Flight Control Subsystem Electronics (FCSE)</b></div> Spec. & Dwg. No. (s) D2-7483-0, D2-7483-1, D2-7483-2 Used-On Dwg. No. 25-80221 Supplier Minneapolis-Honeywell Regulator Co. Supplier's Address 2600 Ridgway Road, Minneapolis 40, Minnesota Supplier's Part Number YG 368 A1 FCSE																																																								
<b>2. Schedule Summary</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Task</th> <th rowspan="2">Reference Doc. No.</th> <th colspan="2">Submittal Dates</th> <th colspan="2">Approval</th> </tr> <tr> <th>Schedule</th> <th>Actual</th> <th>Date</th> <th>By</th> </tr> </thead> <tbody> <tr> <td>Test Plan</td> <td>M-H Aero Report (25)</td> <td>7-13-61</td> <td>7-15-61</td> <td>7-15-61</td> <td>R. M. Gumpert</td> </tr> <tr> <td>Test Requirements</td> <td>M-H Aero Report (25)</td> <td>2-1-62</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Test Procedures</td> <td>M-H Aero Report (25)</td> <td>2-1-62</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Start Test</td> <td style="background-color: #cccccc;"></td> <td>5-1-62</td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>Complete Test</td> <td style="background-color: #cccccc;"></td> <td>11-15-62</td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>First Status Report*</td> <td></td> <td>6-5-62</td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>Final Report</td> <td></td> <td>4-1-63</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Task	Reference Doc. No.	Submittal Dates		Approval		Schedule	Actual	Date	By	Test Plan	M-H Aero Report (25)	7-13-61	7-15-61	7-15-61	R. M. Gumpert	Test Requirements	M-H Aero Report (25)	2-1-62				Test Procedures	M-H Aero Report (25)	2-1-62				Start Test		5-1-62				Complete Test		11-15-62				First Status Report*		6-5-62				Final Report		4-1-63			
Task	Reference Doc. No.	Submittal Dates		Approval																																																				
		Schedule	Actual	Date	By																																																			
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Test Requirements	M-H Aero Report (25)	2-1-62																																																						
Test Procedures	M-H Aero Report (25)	2-1-62																																																						
Start Test		5-1-62																																																						
Complete Test		11-15-62																																																						
First Status Report*		6-5-62																																																						
Final Report		4-1-63																																																						
<b>3. Summary of Tests Required</b> <ul style="list-style-type: none"> <li>A. Environmental - (Temp., Explosion, Pressure, Vibration, Acceleration, Shock, etc.)</li> <li>B. Functional - <ul style="list-style-type: none"> <li>(1) Open Loop Tests <ul style="list-style-type: none"> <li>(a) Sensors</li> <li>(b) Computer</li> <li>(c) Model Selector</li> </ul> </li> <li>(2) Closed Loop Test - System (Simulate the airplane)</li> </ul> </li> <li>C. Radio Interference (RFI)</li> </ul>																																																								
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b> <p style="margin-top: 10px;">FCSE Bench Level Test Equipment or Equivalent, Special purpose (adapted to FCSE Bench Tester) Electronic Test Equipment, Environmental Test Facilities, Screen Room.</p>																																																								
<b>5. Test Conducted by:</b> <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 50%;"><b>Organization</b></td> <td style="width: 50%;"><b>Location</b></td> </tr> <tr> <td>Minneapolis-Honeywell Reg. Co.</td> <td>Minneapolis, Minnesota</td> </tr> </table>					<b>Organization</b>	<b>Location</b>	Minneapolis-Honeywell Reg. Co.	Minneapolis, Minnesota																																																
<b>Organization</b>	<b>Location</b>																																																							
Minneapolis-Honeywell Reg. Co.	Minneapolis, Minnesota																																																							
<b>6. Required Test Witnesses</b> <p style="margin-top: 10px;"><b>Organization</b></p> <p>Boeing - Engineering (2-6163) and Material (2-4452) Quality Control (2-402)</p>																																																								
<b>7. Remarks</b> <p style="margin-top: 10px;">The Qualification Test Plans submitted by the subcontractor will be analyzed and approved by the Guidance and Flight Control Unit. The operational capability of the FCSE will be verified on the operational mockup.</p> <p style="text-align: right; margin-top: 20px;">Date 12-19-61</p>																																																								
1-15-62 *submitted monthly thereafter 2-6181-0-5		<b>161</b>		D2-5697-16 Vol. IV Page 145																																																				

1.1.5.2		QUALIFICATION TEST PLAN		Brief No. 1	
Program Element No.					
<b>1. Item Tested</b> <div style="margin-left: 100px;">Inertial Guidance Subsystem</div>					
Spec. & Dwg. No. (s) Used-On Dwg. No. Supplier      Minneapolis-Honeywell (IHM) Military Products Group Supplier's Address U.S. Highway #19, St. Petersburg, Florida Supplier's Part Number					
<b>2. Schedule Summary</b>					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	by
Test Plan	11	2-15-62			
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
<b>3. Summary of Tests Required</b>					
CP/E Equipment - Associate Contractor will perform tests; Systems Contractor witnesses					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>					
<b>5. Test Conducted by:</b>					
Organization Minneapolis-Honeywell			Location St. Petersburg, Florida		
<b>6. Required Test Witnesses</b>					
Organization The Boeing Company - Seattle					
<b>7. Remarks</b>					
<div style="margin-left: 20px;">             1 The Associate Contractor, Minneapolis-Honeywell, will conduct qualification tests in this area. Test planning will not be added in this document.           </div>					
Date 12-15-61					
1-15-62 *submitted monthly thereafter 2-8181-0-5		<b>162</b>		D2-5397-16 Vol. IV	
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3.1.3.2	QUALIFICATION TEST PLAN				2	
Program Element No.					Brief No.	
1. Item Tested						
Secondary Attitude Reference Subsystem						
Spec. & Dwg. No. (s)						
Used-On Dwg. No.						
Supplier Minneapolis-Honeywell Regulator Company						
Supplier's Address U.S. Highway No. 19, St. Petersburg, Florida						
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan	1-15-62	5-25-62				
Test Requirements						
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report						
3. Summary of Tests Required						
GPAE Type - Associate contractor will perform; system contractor witness						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
5. Test Conducted by: Minneapolis-Honeywell						
Organization		Location St. Petersburg, Florida				
6. Required Test Witnesses						
Organization		The Boeing Company - Seattle				
7. Remarks						
 The Associate Contractor, Minneapolis-Honeywell, will conduct qualification tests in this area. Test planning will not be added in this document.						
		Date		12-20-		
1-15-62		163		D2-5697-16		Page
*submitted monthly thereafter				Vol. IV		27
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AIRBORNE INST

1.3.5.1		<b>QUALIFICATION TEST PLAN</b>				1	
Program Element No.						Brief No.	
<b>1. Item Tested</b> Energy Management Display  Spec. & Dwg. No. (s)      10-20925 Used-On Dwg. No. Supplier      General Precision Incorporated (GPI Division) Supplier's Address      Pleasantville, New York Supplier's Part Number							
<b>2. Schedule Summary</b>							
Task	Reference Doc. No.	Submittal Dates		Approval			
		Schedule	Actual	Date	By		
Test Plan (2-15-62)	D2-5697-16, Vol. IV	6-23-61	6-23-61	6-23-61	T. D. Marshall		
Test Requirements	10-20925	6-23-61	6-23-61	6-14-61	T. D. Marshall		
Test Procedures		1					
Start Test							
Complete Test		2-15-62					
First Status Report*		3-15-62	1				
Final Report		10-1-62					
<b>3. Summary of Tests Required</b>							
1. Non-environmental tests (standard room conditions), including Temp, Barometric Pressure, Relative Humidity, and Cleanliness. 2. Environmental-operational tests including, Vibration, Shock, Acceleration, Zero Gravity, High and Low Temp. and Temp Shock. 3. Environmental tests, including Temp, Relative Humidity and Vibration.  Note: Detailed test requirements are included in document. D2-6140, "Flight Instruments General Specification."							
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>							
None.							
<b>5. Test Conducted by:</b> General Precision Inc. (GPI Division)							
Organization				Location      Pleasantville, New York			
<b>6. Required Test Witnesses</b>							
Organization      2-6167 (Boeing Design Group)							
<b>7. Remarks</b> <span style="border: 1px solid black; padding: 2px;">1</span> Being negotiated per D2-50396.							
		Date		12-20-61			
1-15-62				<b>164</b>		D2-5697-16 Vol. IV	
*submitted monthly thereafter 2-6181-6-5						Page 148	

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1.3.5.2	QUALIFICATION TEST PLAN				1	
Program Element No.					Brief No.	
1. Item Tested Attitude-Director Indicator						
Spec. & Dwg. No. (s) 10-20926						
Used-On Dwg. No.						
Supplier Lear						
Supplier's Address Grand Rapids, Michigan						
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan (Prel.)	D2-5697-16, Vol. IV	8-14-61	8-14-61	8-14-61	W. D. Reynolds	
Test Requirements	10-20926	7-20-61	7-20-61	7-20-61	W. D. Reynolds	
Test Procedures						
Start Test		3-15-62				
Complete Test		9-1-62				
First Status Report*		4-15-62				
Final Report		10-1-62				
3. Summary of Tests Required						
1. Non-environmental tests (standard room conditions) including Temp, Barometric Pressure, Relative Humidity, and Cleanliness.						
2. Environmental tests including Temp, Relative Humidity, and Vibration.						
3. Environmental-operational tests including, Vibration, Shock, Acceleration, Zero Gravity, High and Low Temp. and Temp Shock.						
Note: Detailed test requirements are included in document D2-8140, "Flight Instruments General Specification".						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
None						
5. Test Conducted by:						
Organization		Location				
Lear		Grand Rapids, Michigan				
6. Required Test Witnesses						
Organization 2-6167 (Boeing Design Group)						
7. Remarks						
1 Being negotiated per D2-80396						
Date 12-20-61						
1-15-62		165		D2-5697-16		Page
*submitted monthly thereafter				Vol. IV		
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AIRBORNE TEST

1.3.5.3	<b>QUALIFICATION TEST PLAN</b>		1
Program Element No.			Brief No.
<b>1. Item Tested</b> <b>Indicator</b> Rate of Climb Spec. & Dwg. No. (s)      10-20931 Used-On Dwg. No. Supplier      Kollsman Supplier's Address      Long Island, New York Supplier's Part Number			
<b>2. Schedule Summary</b>			
Task	Reference Doc. No.	Submittal Dates Schedule    Actual	Approval Date      By
Test Plan (Prel.)	D2-5597-16, Vol. IV	8/14/61    8/14/61	8/14/61    P. D. Reynolds
Test Requirements	10-20931	6/30/61    6/30/61	6/30/61    P. D. Reynolds
Test Procedures		1	
Start Test		3-1-62	
Complete Test		9-1-62	
First Status Report*		4-1-62	
Final Report		10-1-62	
<b>3. Summary of Tests Required</b> 1. Non-environmental tests (standard room conditions) including Temp, Barometric Pressure, Relative Humidity, and Cleanliness. 2. Environmental tests including Temp, Relative Humidity, and Vibration. 3. Environmental-operational tests including, Vibration, Shock, Acceleration, Zero Gravity, High and Low Temp. and Temp. Shock.  Note: Detailed test requirements are included in document D2-8140, "Flight Instruments General Specification".			
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>  <div style="text-align: center;">None</div>			
<b>5. Test Conducted by:</b> <div style="display: flex; justify-content: space-between;"> <div>           Organization      <u>Kollsman</u> </div> <div>           Location                                        Long Island, New York         </div> </div>			
<b>6. Required Test Witnesses</b> Organization      2-6167 (Boeing Design Group)			
<b>7. Remarks</b> 1      Being negotiated per D2-80396			
		Date	12-20-61
1-15-62 *submitted monthly thereafter 2-6181-0-5	166	D2-5697-16 Vol. IV	Page 150

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1.3.5.4		QUALIFICATION TEST PLAN				1	
Program Element No.						Brief No.	
<b>1. Item Tested</b> Side Slip Indicator  Spec. & Dwg. No. (s)      10-81015 Used-On Dwg. No. Supplier      Holloman Supplier's Address      Long Island, New York Supplier's Part Number							
<b>2. Schedule Summary</b>							
Task	Reference Doc. No.	Submittal Dates		Approval			
		Schedule	Actual	Date	By		
Test Plan (Prel.)	D2-5697-16, Vol. IV	8/14/61	8/14/61	8/14/61	T. D. Reynolds		
Test Requirements	10-81015	7/20/61	7/20/61	7/20/61	T. D. Reynolds		
Test Procedures		1-15-62					
Start Test		3-15-62					
Complete Test		5-1-62					
First Status Report*		4-15-62					
Final Report		10-1-62					
<b>3. Summary of Tests Required</b>							
1. Non-environmental tests (standard room conditions) including Temp, Barometric Pressure, Relative Humidity, and Cleanliness.  2. Environmental tests including Temp, Relative Humidity, and Vibration.  3. Environmental-operational tests including, Vibration, Shock, Acceleration, Zero Gravity, High and Low Temp. and Temp Shock.  Note: Detailed test requirements are included in document D2-8140, "Flight Instruments General Specification".							
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>							
None							
<b>5. Test Conducted by:</b>							
Organization	Vendor Tested	Location					
	Holloman	Long Island, New York					
<b>6. Required Test Witnesses</b>							
Organization	2-6167 (Doeing Design Group)						
<b>7. Remarks</b> Being negotiated per D2-80396							
		Date		12-20-61			
1-15-62 *submitted monthly thereafter 2-6167-0-5		<b>167</b>		D2-5697-16 Vol. IV		Page 15.1	

1.3.5.5.

## QUALIFICATION TEST PLAN

1

Program Element No.

Brief No.

## 1. Item Tested

Angle of Attack Indicator

Spec. &amp; Dwg. No. (s)

10-20930

Used-On Dwg. No.

Supplier

Kollman

Supplier's Address

Long Island, New York

Supplier's Part Number

## 2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan (P-1)	D2-5597-15, Vol. IV	8/14/51	8/14/51	8/14/51	W.D. Hornsfield
Test Requirements	10-20930	7/20/51	7/20/51	7/20/51	W.D. Hornsfield
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					

## 3. Summary of Tests Required

1. Non-environmental tests (standard room conditions) including Temp, Barometric Pressure, Relative Humidity, and Cleanliness.
2. Environmental tests including Temp, Relative Humidity, and Vibration.
3. Environmental-operational tests including, Vibration, Shock, Acceleration, Zero Gravity, High and Low Temp. and Temp Shock.

Note: Detailed test requirements are included in document D2-8140, "Flight Instruments General Specification".

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

None

## 5. Test Conducted by:

Organization

Vendor Tested

Location

Kollman

Long Island, New York

## 6. Required Test Witnesses

Organization

2-5167 (Boeing Design Group)

## 7. Remarks



Being Negotiated per D2-80396.

Date

12-20-61

1-15-62

\*submitted monthly thereafter

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AIRBORNE TEST

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1.3.5.6	QUALIFICATION TEST PLAN				1	
Program Element No.					Brief No.	
1. Item Tested      Altitude Indicator						
Spec. & Dwg. No. (s)		10-20923				
Used-On Dwg. No.						
Supplier		Huyck				
Supplier's Address		Huntington Station, New York				
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan (Prel)	D2-5697-16, Vol. IV	5/14/61	5/14/61	5/14/61	E. D. Janssens	
Test Requirements	10-20923	5/14/61	6/14/61	6/14/61	E. D. Janssens	
Test Procedures		1-1				
Start Test		2-15-61				
Complete Test		6-1-61				
First Status Report*		3-15-61				
Final Report		10-1-62				
3. Summary of Tests Required						
<p>1. Non-environmental tests (standard room conditions) including Temp, Barometric Pressure, Relative Humidity, and Cleanliness.</p> <p>2. Environmental tests including Temp, Relative Humidity, and Vibration.</p> <p>3. Environmental-operational tests including, Vibration, Shock, Acceleration, Zero Gravity, High and Low Temp. and Temp Shock.</p> <p>Note: Detailed test requirements are included in document D2-8140, "Flight Instruments General Specification".</p>						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
None						
5. Test Conducted by:						
Organization	Vendor Tested	Location				
	Huyck	Huntington Station, N. Y.				
6. Required Test Witnesses						
Organization	2-6167 (Boeing Design Group)					
7. Remarks						
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 10px; text-align: center; line-height: 20px;">1</div> <div>Being negotiated per D2-80396.</div> </div>						
				Date	12-20-61	
1-15-62 *submitted monthly thereafter 2-6181-0-5		169		D2-5697-16 Vol. IV		Page 153

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1.3.5.7		QUALIFICATION TEST PLAN		Brief No.	
<b>Program Element No.</b> <b>1. Item Tested</b> Velocity Indicator					
<b>Spec. &amp; Dwg. No. (s)</b> 10-20329 <b>Used-On Dwg. No.</b> <b>Supplier</b> <b>Supplier's Address</b> Huyck <b>Supplier's Part Number</b> Huntington Station, New York					
<b>2. Schedule Summary</b>					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan (2-1)	D2-5697-16, Vol. IV	2/15/61	2/15/61	2/15/61	E. D. Hornblum
Test Requirements	10-20329	7/16/61	7/16/61	7/16/61	E. D. Hornblum
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
<b>3. Summary of Tests Required</b>					
1. Non -environmental tests (standard room conditions) including Temp, Barometric Pressure, Relative Humidity, and Cleanliness. 2. Environmental tests including Temp, Relative Humidity, and Vibration. 3. Environmental-operational test including, Vibration, Shock, Acceleration, Zero Gravity, High and Low Temp. and Temp Shock. Note: Detailed test requirements are included in document D2-8140, "Flight Instruments General Specification".					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>					
None					
<b>5. Test Conducted by:</b>					
Organization		Vendor Tested	Location		
		Huyck	Huntington Station, New York		
<b>6. Required Test Witnesses</b>					
Organization		2-6167 (Boeing Design Group)			
<b>7. Remarks</b>					
Being negotiated per D2-80396.					
		Date	12-20-61		
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*submitted monthly thereafter			D2-5697-16		Page
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1.3.5.3	QUALIFICATION TEST PLAN				1	
Program Element No.					Brief No.	
<b>1. Item Tested</b> Velocity Error Indicator  Spec. & Dwg. No. (s)                      10-81012 Used-On Dwg. No. Supplier                      Huyck Supplier's Address              Huntington Station, New York Supplier's Part Number						
<b>2. Schedule Summary</b>						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan (Pre-I)	D2-5697-16, Vol IV	3/14/61	3/14/61	8/14/61	F. D. Reynolds	
Test Requirements	10-81012	5/30/61	6/30/61	6/30/61	F. D. Reynolds	
Test Procedures						
Start Test		5-1-62				
Complete Test		5-1-62				
First Status Report*		4-1-62				
Final Report		10-1-62				
<b>3. Summary of Tests Required</b>  1. Non-environmental tests (standard room conditions) including Temp, Barometric Pressure, Relative Humidity, and Cleanliness.  2. Environmental Tests including Temp, Relative Humidity, and Vibration.  3. Environmental-operational tests including, Vibration, Shock, Acceleration, Zero Gravity, High and Low Temp. and Temp. Shock.  Note: Detailed test requirements are included in document D2-8140, "Flight Instruments General Specification".						
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>  <div style="text-align: center;">None</div>						
<b>5. Test Conducted by:</b> <div style="display: flex; justify-content: space-between;"> <div>Organization</div> <div>Vendor Tested</div> <div>Location</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div></div> <div>Huyck</div> <div>Huntington Station, New York</div> </div>						
<b>6. Required Test Witnesses</b> <div style="display: flex; justify-content: space-between;"> <div>Organization</div> <div></div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div></div> <div>2-6167 (Boeing Design Group)</div> </div>						
<b>7. Remarks</b> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; width: 30px; height: 30px; margin-right: 10px; display: flex; align-items: center; justify-content: center;">1</div> <div>Being negotiated per D2-80396.</div> </div>						
		Date		12-20-61		
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1.3.5.9	QUALIFICATION TEST PLAN				1
Program Element No.					Brief No.
1. Item Tested Thermal Monitor Display (Requirements Not Firm)					
Spec. & Dwg. No. (s)		10-20927			
Used-On Dwg. No.					
Supplier		Unknown			
Supplier's Address					
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan (Vol. I)	D2-5697-15, Vol. IV	6/14/61	6/14/61	6/14/61	T. D. Arnold
Test Requirements	10-20927	7/31/61	7/31/61	7/31/61	T. D. Arnold
Test Procedures		1-1-62			
Start Test		1-1-62			
Complete Test		6-1-62			
First Status Report*		5-1-62			
Final Report		10-1-62			
3. Summary of Tests Required					
1. Non-environmental tests (standard room conditions) including Temp, Barometric Pressure, Relative Humidity, and Cleanliness.					
2. Environmental tests including Temp, Relative Humidity, and Vibration.					
3. Environmental-operational tests including, Vibration, Shock, Acceleration, Zero Gravity, High and Low Temp. and Temp. Shock.					
Note: Detailed test requirements are included in document D2-8140, "Flight Instruments General Specification".					
4. Special Facilities and/or Test Equipment (include Estimated Lead Time)					
None					
5. Test Conducted by:					
Organization	Vendor Tested	Location			
6. Required Test Witnesses					
Organization	2-6167 (Boeing Design Group)				
7. Remarks					
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 10px;"></div> <div>Will be negotiated per D2-30396 with supplier.</div> </div>					
				Date	12-20-61
1-15-62		172		D2-5697-16	
2-6181-0-5				Page 156.	

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1.3.0		QUALIFICATION TEST PLAN		Brief No.	
Program Element No.					
<b>1. Item Tested</b> Communications Test Trucking Shipyard.					
Spec. & Dwg. No. (s)		Boeing Eng. No. 25-00020			
Used-On Dwg. No.					
Supplier		RCA - Associate Contractor			
Supplier's Address		Front and Cooper Streets, Camden, New Jersey			
Supplier's Part Number					
<b>2. Schedule Summary</b>					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	1-15-62				
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report		2-15-62			
<b>3. Summary of Tests Required</b>					
GFAE Type - Associate Contractor will perform; system contractor will witness.					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>					
<b>5. Test Conducted by:</b>					
Organization		RCA      Location      Camden, New Jersey			
<b>6. Required Test Witnesses</b>					
Organization					
<b>7. Remarks</b>					
The Associate Contractor, RCA, will conduct qualification tests in this area. Test Planning will not be added to this document.					
Date 12-15-61					
1-15-62 *submitted monthly thereafter 2-6181-0-5		<b>173</b>		D2-5697-16 Vol. IV	
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1.3.7.1		QUALIFICATION TEST PLAN		-	
Program Element No.		Brief No.			
<b>1. Item Tested</b> Test Data/Voice Control Antenna & Transmission Line System. Spec. & Dwg. No. (s) D2-5697, Antennas, Windows & Feed Lines Spec. Used-On Dwg. No. Supplier Boeing Co. (plus various subcontractors) Supplier's Address Seattle, Washington Supplier's Part Number					
<b>2. Schedule Summary</b>					
Task	Reference Doc. No.	Submission Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	D2-5697-16, Vol. IV	8-20-62	8-20-62	8-20-62	B. J. [Signature]
Test Requirements	D2-5697-0	8-20-62			
Test Procedures	D2-5697-0	8-20-62			
Start Test					
Complete Test					
First Status Report*		12-2-62			
Final Report	D2-5697-0	2-15-63			
<b>3. Summary of Tests Required</b> Temperature Tests - From 140°F to (min. to be determined) Humidity Tests - From 55°F to 100°F at 100% relative humidity Vibration Tests - Random vibration in 3 mutually perpendicular axes Shock Tests - 0.15g acceleration impact, shocks from 55 to 100 cps Acceleration Tests - 1.5 to 10 g's if specified in individual equip. spec. Temperature Shock Tests + 105°F to -40°F Sand and Dust Tests - 0.1 to 0.5 grains/ft <sup>3</sup> , 77°F to 160°F, velocity to 500 ft/min. Temperature-Altitude Tests + 80°F to 105°F, atmos. to 50,000 ft.					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b> Some temperature, shock and vibration tests will require simulated Dyna-Seal installations such as antennas mounted in wing panels and waveguide attached to structure.					
<b>5. Test Conducted by:</b> Boeing Eng. Labs. <div style="display: flex; justify-content: space-between;"> <span><b>Organization</b></span> <span><b>Location</b> Seattle, Wash.</span> </div>					
<b>6. Required Test Witnesses</b> <div style="display: flex; justify-content: space-between;"> <span><b>Organization</b> D-166</span> </div>					
<b>7. Remarks</b> There are a great many components in an antenna system. As they are released via source control drawings, P&ID sheets, and manufacturing drawings, individual test plans will be incorporated in this document.					
Date 12-15-62					
1-15-62 *submitted monthly thereafter 2-6181-0-5		<b>174</b>		D2-5697-16 Vol. IV	
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<b>1.3.7.1</b> <b>Program Element No.</b>	<b>QUALIFICATION TEST PLAN</b>		2	<b>Brief No.</b>
<b>1. Item Tested</b> Command Data/Voice Receiver Antenna & Transmission Line System				
<b>Spec. &amp; Dwg. No. (s)</b> <b>Used-On Dwg. No.</b> <b>Supplier</b> Boeing Co. (plus various subcontractors) <b>Supplier's Address</b> Seattle, Washington <b>Supplier's Part Number</b>				
<b>2. Schedule Summary</b>				
<b>Task</b>	<b>Reference Doc. No.</b>	<b>Submittal Dates</b>		<b>Approval</b>
		<b>Schedule</b>	<b>Actual</b>	<b>Date      By</b>
Test Plan	D2-5697-16, Vol. IV	9-20-61	9-15-61	9-18-61      R.T.H.P.
Test Requirements	D2-5697-0	9-20-61		
Test Procedures	D2-5697-1	9-20-61		
Start Test		11-15-61		
Complete Test		12-2-61		
First Status Report*		12-2-61		
Final Report	D2-5697-2	3-15-62		
<b>3. Summary of Tests Required</b> Temperature Tests - From 140°F (max. to be determined) Humidity Tests - From 55°F to 100°F at 100% relative humidity Vibration Tests - Random vibration in 3 mutually perpendicular axes Shock Tests - G15g acceleration impact shocks from 5 to 100 cps Acceleration Tests - 1.5 to 10 g's if specified in individual equip. spec. Temperature Shock Tests + 135°F to -40°F Sand and Dust Tests - 0.1 to 0.5 grams/ft <sup>3</sup> , 77°F to 160°F, velocity to 500 ft/min Temperature-Altitude Tests + 80°F to 135°F, atmos. to 50,000 ft.				
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>  Some temperature, shock and vibration tests will require simulated Dyna-Soar installation such as antennas mounted in wing panels and waveguide attached to structure.				
<b>5. Test Conducted by:</b> Boeing Eng. Labs <div style="display: flex; justify-content: space-between;"> <span><b>Organization</b></span> <span><b>Location</b>      Seattle, Wash.</span> </div>				
<b>6. Required Test Witnesses</b> <b>Organization</b> 2-6166				
<b>7. Remarks</b>  There are a great many components in an antenna system. As they are released via source control drawings, BAC sheets, and manufacturing drawing, individual test plans will be incorporated in this document.				
Date 12-15-61				
1-15-62 *submitted monthly thereafter 2-6181-0-5		<b>175</b>	D2-5697-16 Vol. IV	Page 150

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1.3.7.1	QUALIFICATION TEST PLAN				3	
Program Element No.					Brief No.	
<b>1. Item Tested</b> High Temperature Nickel Flexible Waveguide - X-Band <div style="text-align: right;">K-Band</div> Spec. & Dwg. No. (s) 10-81121, High Temperature Waveguide - Flexible Used-On Dwg. No. Not Known Supplier Not Known Supplier's Address Supplier's Part Number						
<b>2. Schedule Summary</b>						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan (prel.)	D2-5697-16 Vol. IV	1-12-62	1-12-62	1-12-62	B. J. McGaffrey	
Test Requirements	10-81121	2-2-62			"	
Test Procedures	Supplier Document	6-18-62			"	
Start Test		9-17-62				
Complete Test		10-17-62	11-17-62			
First Status Report*		10-17-62	11-17-62			
Final Report		11-17-62				
<b>3. Summary of Tests Required</b> Electrical Characteristics - Measure attenuation stability of attenuation, VSWR, power handling capability. Shock - Mil Spec. drop tests and transportation vibration envelope. Vibration - Random vibration in three mutually perpendicular axes. Time-Temperature - Following typical flight temperature duty cycle: cycled four times. Pressure - pressure leakage and expansion tests Structural Integrity - Extension, flexure, bend angle tests.						
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b> High temperature and random vibration test facilities may not be available at the suppliers plant.						
<b>5. Test Conducted by:</b> Not known <div style="display: flex; justify-content: space-between;"> <span>Organization</span> <span>Location Not known</span> </div>						
<b>6. Required Test Witnesses</b> Organization 2-6166 (Boeing Design Orgn.)						
<b>7. Remarks</b> <div style="margin-left: 20px;">  Tentative dates only. To be negotiated with supplier who is to be selected on or about 5-18-62 </div>						
Date 1-19-62						
1-15-62 *submitted monthly thereafter 2-6181-0-5		176		D2-5697-16 Vol. IV		Page 150.1



1.3.7.5	QUALIFICATION TEST PLAN		1
Program Element No.			Brief No.
<b>1. Item Tested</b> C-Band Transponder Antenna & Transmission Line System Spec. & Dwg. No. (s) D2-8136, Antennas, Windows & Feed Lines Spec. Used-On Dwg. No. Supplier Boeing Co. (plus various subcontractors) Supplier's Address Seattle, Washington Supplier's Part Number			
<b>2. Schedule Summary</b>			
Task	Reference Doc. No.	Submittal Dates Schedule Actual	Approval Date By
Test Plan	D2-5697-16, Vol. IV	1-15-62 2-6-62	2/6/62 [Signature]
Test Requirements	D2-80400-0	1-15-62	
Test Procedures	D2-80400-1	1-15-62	
Start Test		1-15-62	
Complete Test		2-6-62	
First Status Report*		12-1-62	
Final Report	D2-80400-2	3-15-62	
<b>3. Summary of Tests Required</b>			
Temperature Tests - From 140°F to (max. to be determined) Humidity Tests - From 55°F to 100°F at 100% relative humidity Vibration Tests - Random vibration in 3 mutually perpendicular axes Shock Tests - 0.5g acceleration impact shocks from 5 to 100 cps Acceleration Tests - 1.5 to 10 g's if specified in individual equip. spec. Temperature Shock Tests + 185°F to -40°F Sand and Dust Tests - 0.1 to 0.5 grams/FT <sup>3</sup> , 77°F to 160°F, velocity to 500 ft/min. Temperature-Altitude Tests + 800°F to 185°F, atmos. to 50,000 ft.			
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>			
Some temperature, shock and vibration tests will require simulated Dyna-Soar installations such as antennas mounted in wing panels and waveguide attached to structure.			
<b>5. Test Conducted by:</b> Boeing Eng. Labs			
Organization	Location Seattle, Wash.		
<b>6. Required Test Witnesses</b>			
Organization	2-6166		
<b>7. Remarks</b>			
There are a great many components in an antenna system. As they are released via source control drawings, DAC sheets, and manufacturing drawing, individual test plans will be incorporated in this document.			
		Date 12-1-62	
1-15-62	*submitted monthly thereafter	177	D2-5697-16 Vol. IV
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1.3.7.5

## QUALIFICATION TEST PLAN

2

Program Element No.

Brief No.

1. Item Tested High Temperature Micro Flexible Waveguide - C-Band

Spec. & Draw. No. (s) 10-81121, High Temperature Waveguide - Flexible  
Used-C. Draw. No. Not Known

Supplier Not Known

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submital Dates		Approval	
		Schedule	Actual	Date	By
Test Plan (Prel.)	D2-5697-16 Vol. IV	1-12-62	1-12-62	1-12-62	B. I. McCaffrey
Test Requirements	10-81121	2-2-62			
Test Procedures	Supplier Document	5-18-62			
Start Test		5-17-62			
Complete Test		6-16-62			
First Status Report*		6-17-62			
Final Report		6-17-62			

## 3. Summary of Tests Required

Electrical Characteristics- Measure attenuation stability of attenuation, VSWR, power handling capability.

Shock- MIL Spec drop tests and transportation vibration envelope.

Vibration-Random vibration in three mutually perpendicular axes.

Time-Temperature - Following typical flight temperature duty cycle; cycled four times.

Pressure - pressure leakage and expansion tests

Structural Integrity - Extension, flexure, bend angle tests.

## 4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

High temperature and random vibration test facilities may not be available at the suppliers plant.

5. Test Conducted by: Not known  
Organization

Location Not known

## 6. Required Test Witnesses

Organization 2-6166 (Boeing Design Orgn)

## 7. Remarks



Tentative dates only. To be negotiated with supplier who is to be selected on or about 5-18-62

Date 1-19-62



1-15-62

\*submitted monthly thereafter  
2-6181-0-5

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1.3.3.2		QUALIFICATION TEST PLAN			
Program Element No.				Brief No.	
<b>1. Item Tested</b> Computer, Course Section					
<b>Spec. &amp; Dwg. No. (s)</b> <b>Used-On Dwg. No.</b> <b>Supplier</b> Nortronics <b>Supplier's Address</b> Hawthorne, California <b>Supplier's Part Number</b> 5153700-501					
<b>2. Schedule Summary</b>					
Task	Reference Doc. No.	Submittal Schedule	Approval Date	By	
Test Plan (Prel.)	12-5697-16, Vol. IV	8-14-61	8-14-61	A. Brown	
Test Requirements		1-5-62			
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
<b>3. Summary of Tests Required</b>					
Environmental Tests a. Vibration b. Shock c. Acceleration <span style="font-size: 2em;">2</span> d. Temperature e. Humidity Functional and Performance Tests a. During environmental tests b. Following environmental tests Radio Frequency Interference Tests a. Susceptibility to Radio Interference b. Radiated Interference					
<b>4. Special Facilities and/or Test Equipment (include Estimated Lead Time)</b>					
Test Facilities of the supplier will be utilized.					
<b>5. Test Conducted by:</b>					
Organization			Location		
Nortronics Div., Northrop Corp.			Hawthorne, California		
<b>6. Required Test Witnesses</b>					
Organization					
The Boeing Company					
<b>7. Remarks</b>					
<span style="font-size: 2em;">1</span> Dates are subject to negotiation with supplier.					
<span style="font-size: 2em;">2</span> Requirement for this test will depend upon the design.					
Date 1-10-62					
1-15-62		179		L2-5697-16	
*submitted monthly thereafter 2-6/81-0-5				Vol. IV	
				Page 161	

8.2		QUALIFICATION TEST PLAN		Brief No.	
Program Element No.					
1. Item Tested		Program, Separation Sequence			
Spec. & Dwg. No. (s)					
Used-Cn Dwg. No.					
Supplier		The Boeing Company			
Supplier's Address		Seattle, Wash.			
Supplier's Part Number		102-680-401-00			
2. Schedule Summary					
Task	Reference Doc. No.	Submitted Date Schedule Actual	Approval Date By		
Test Plan	D2-5697-16, Vol. IV	8-30-62	8-30-62	8-30-62	S. Tamm
Test Requirements		7-28-62			
Test Procedures		7-28-62			
Start Test		7-30-62			
Complete Test		8-30-62			
First Status Report*		8-15-62			
Final Report		10-30-62			
3. Summary of Tests Required					
Environmental Tests					
a. Vibration					
b. Shock					
c. Acceleration 					
d. Temperature					
e. Humidity					
Functional and Performance Tests					
a. During environmental tests					
b. Following environmental tests					
Radio Frequency Interference Tests					
a. Susceptibility to Radio Interference					
b. Radiated Interference					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Existing environmental facilities will be adequate for the anticipated testing. Test fixtures will be required; however, these will be available from the development test program.					
5. Test Conducted by:					
Organization		Location			
The Boeing Company		2.01 Bldg. Seattle, Wash.			
6. Required Test Witnesses					
Organization		Avionics Integration Group - Boeing Electronics Packaging Group - Boeing			
7. Remarks					
 Requirement for this test will depend upon the design.					
Date 1-10-62					
1-15-62		180		D2-5697-16 Vol. IV	
*submitted monthly thereafter 2-6181-0-5				Page 162	

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1. Item Tested		QUALIFICATION TEST PLAN		Brief No.	
Converter, Signal Data					
Spec. & Dwg. No. (s)					
Used-On Dwg. No.					
Supplier The Boeing Company					
Supplier's Address Seattle, Wash.					
Supplier's Part Number 102-621-305-00					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan		1-15-62	1-15-62	1-15-62	
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
Environmental Tests					
a. Vibration					
b. Shock					
c. Acceleration					
d. Temperature					
e. Humidity					
Functional and Performance Tests					
a. During environmental tests					
b. Following environmental tests					
Radio Frequency Interference Tests					
a. Susceptibility to Radio Interference					
b. Radiated Interference					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Existing environmental facilities will be adequate for the anticipated testing. Test fixtures will be required; however, these will be available from the development test program.					
5. Test Conducted by:					
Organization		The Boeing Company		Location 2.01 Bldg. Seattle, Wash.	
6. Required Test Witnesses					
Organization Avionics Integration Group - Boeing					
Electronics Packaging Group - Boeing					
7. Remarks					
1 Requirement for this test will depend upon the design.					
Date 1-18-62					
1-15-62		*submitted monthly thereafter		181	
2-6181-0-5				D2-5697-16 Vol. IV	
				Page 102	

1.4.1		QUALIFICATION TEST PLAN		1	
Program Element No.				Brief No.	
1. Item Tested      Conversion and Storage Equipment  Spec. & Dwg. No. (c)    10-61003 Used-Cn Dwg. No. Supplier                    Electro-Mechanical Research Corp. Supplier's Address        Sarasota, Florida Supplier's Part Number    1					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	D2-80121				
Test Requirements	10-61003	8-25-61			
Test Procedures	D2-80121				
Start Test					
Complete Test					
First Status Report*					
Final Report		9-7-62			
3. Summary of Tests Required      Qualification Testing is required in the following areas:					
1. <u>ENVIRONMENT</u> 1.1 Vibration 1.2 Shock 1.3 Acceleration 1.4 Temperature 1.5 Humidity		<u>GENERAL CONDITIONS</u> Complex, 6.5 (RMS), 30 min. per direction  Anticipated extremes for both flight and storage "              "              "              "              "              "			
2. Signal Outputs					
3. Power Input Variation		Requirements and procedures per D2-7391			
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
5. Test Conducted by:					
Organization EMR			Location Sarasota, Florida		
6. Required Test Witnesses					
Organization			2-5636-0 Dyna-Soar Test Data Systems Unit		
7. Remarks					
 *EMR WILL PREPARE D2-80121. Schedule dates are being negotiated. Requirements and Procedures per D2-7481   Under environmental conditions. Performance with simulated inputs will be measured.					
		Date		12-21-61	
1-15-62 *submitted monthly thereafter 2-6181-0-		182		D2-5697-16 Vol. IV	
				Page 164	

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1.4.2.2		QUALIFICATION TEST PLAN		Brief No. 1	
Program Element No.					
<b>1. Item Tested</b> Surface Temperature Transducer (3000°F) <b>Spec. &amp; Dwg. No. (s)</b> D2-0015, 10-20924 <b>Used-On Dwg. No.</b> <b>Supplier</b> To be determined <b>Supplier's Address</b> <b>Supplier's Part Number</b>					
<b>2. Schedule Summary:</b>					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	by
Test Plan (Final)	D2-0015, 10-20924				
Test Requirements	D2-0015				
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
<b>3. Summary of Tests Required</b> <ul style="list-style-type: none"> <li>a. Shock; 30 g's for 11±1 milliseconds along 2 axis</li> <li>b. Vibration; Dyna-Soar re-entry environment simulation</li> <li>c. Vibration; Dyna-Soar boost environment simulation</li> <li>d. Static Acceleration; 10 g's sustained along 3 axis</li> <li>e. Temperature; Dyna-Soar non-operational (-65 to 170°F) environment</li> <li>f. Temperature; low (-200°F) environment</li> <li>g. Humidity; 95% C. H. @ 85°F environment</li> <li>h. Temperature Cycles; Dyna-Soar operational (3000°F Max.)</li> <li>i. Thermal Shock; 200°F per sec from 1000°F to 2000°F</li> </ul>					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>  None anticipated					
<b>5. Test Conducted by:</b> Supplier <div style="display: flex; justify-content: space-between;"> <span>Organization</span> <span>Location</span> </div>					
<b>6. Required Test Witnesses</b> <div style="display: flex; justify-content: space-between;"> <span>Organization</span> <span>Communications and Transducers Unit 2-6165</span> </div>					
<b>7. Remarks</b> <div style="margin-left: 20px;">  SOD, Scheduled release date 26 March 1962   Doing preliminary planning   To be negotiated with supplier. (Approx May 1, 1962) </div> <p style="margin-top: 10px;">Note: D2-0015 Dev. Proc Spec Only (SEE Subcontract at) See Vol. III of D2-0015-1 Date</p>					
1-15-62 *submitted monthly thereafter 2-6181-0-5		183		D2-5697-16 Vol. IV	
				Page 16-41	

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QUALIFICATION TEST PLAN		Brief No. 2	
<b>Program Element No.</b>			
<b>1. Item Tested</b> High Temperature Flutter Windtunnels			
Spec. & Dwg. No. (s) 10-31095			
Used-On Dwg. No.			
Supplier			
Supplier's Address To be determined			
Supplier's Part Number			
<b>2. Schedule Summary</b>			
Task	Reference Doc. No.	Submittal Dates Schedule Actual	Approval Date by
Test Plan (201.)	10-31095, Vol. 1	12-15-61 12-15-61	12-15-61 M. J. Jones
Test Requirements	10-31095		
Test Procedures			
Start Test			
Complete Test			
First Status Report*			
Final Report			
<b>3. Summary of Tests Required</b>			
Test Requirements being negotiated - will be established in time to support release of SCD.			
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>			
Unknown			
<b>5. Test Conducted by:</b>			
Organization	Supplier	Location	
<b>6. Required Test Witnesses</b>			
Organization	Communication and Transducers Unit 2-6166		
<b>7. Remarks</b>			
SCD, scheduled release date February 15, 1962 To be negotiated with supplier (Approx May 1, 1962)			
		Date	12-15-61
1-15-62 *submitted monthly thereafter 2-6166-0-5		<b>184</b>	D2-5697-16 Vol. IV Page 104.2

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1.4.1.1 Program Element No.	<b>QUALIFICATION TEST PLAN</b>				Brief No.	
1. Item Tested <span style="float: right;">Hi-Temperature Acceleration Transducers</span>						
Spec. & Dwg. No. (s) <span style="float: right;">10-31094 </span>						
Used-On Dwg. No.						
Supplier <span style="float: right;"></span>						
Supplier's Address <span style="float: right;">To be determined </span>						
Supplier's Part Number						
2. Schedule Summary						
Task	Reference Doc. No.	Submittal Dates		Approval		
		Schedule	Actual	Date	By	
Test Plan						
Test Requirements						
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report						
3. Summary of Tests Required						
Test requirements being negotiated - will be established in time to support release of SCD.						
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)						
Unknown						
5. Test Conducted by:						
Organization		Supplier		Location		
6. Required Test Witnesses						
Organization		Communication and Transducers Unit 2-6166				
7. Remarks						
<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"> <span>1</span> <span>2</span> </div> <div>             SCD, Scheduled release date February 15, 1962              To be negotiated with supplier (Approx May 1, 1962)           </div> </div>						
Date 12-15-61						
1-15-62 *submitted monthly thereafter 2-6161-0-5				<b>185</b>		D2-5697-16 Vol. IV Page 164.3

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1.3.1.1		QUALIFICATION TEST PLAN		Brief No. 4	
Program Element No.					
1. Item Tested Disconnect, Aero-Pressure Tubing - Aero-Pressure Transducers					
Spec. & Dwg. No. (s)		10-81119			
Used-On Dwg. No.					
Supplier					
Supplier's Address		To be determined			
Supplier's Part Number					
2. Schedule Summary					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan (SDD)					
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
3. Summary of Tests Required					
<p>Test requirements being negotiated - will be established in time to support release of SCD. </p>					
4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)					
Unknown					
5. Test Conducted by:      Supplier					
Organization		Location			
6. Required Test Witnesses      Communications and Transducers Unit					
Organization		2-6166			
7. Remarks					
SCD, scheduled release date, June 1, 1962 To be negotiated with supplier (Approx July 1, 1962)					
		Date		12-15-62	
1-15-62		186		D2-5697-16	
*submitted monthly thereafter				Vol. IV	
2-6161-0-5				Page 161.4	

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1.1.1.1		QUALIFICATION TEST PLAN			
Program Element No.				Brief No. 5	
<b>1. Item Tested</b> Nose Cap Surface Temperature Instrumentation					
Spec. & Dwg. No. (s) D2-5697-0, -1					
Used-On Dwg. No.					
Supplier  Boeing or Chance-Vought Corp.					
Supplier's Address					
Supplier's Part Number					
<b>2. Schedule Summary</b>					
Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan (Final)	D2-5697-0	10-15-62	10-15-62	10-15-62	
Test Requirements					
Test Procedures					
Start Test					
Complete Test					
First Status Report*					
Final Report					
<b>3. Summary of Tests Required</b>					
Test requirements are being determined.					
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>					
Unknown					
<b>5. Test Conducted by:</b> Boeing or Chance-Vought <div style="display: flex; justify-content: space-between;"> <span>Organization</span> <span>Location</span> </div>					
<b>6. Required Test Witnesses</b> Communications and Transducers Unit <div style="display: flex; justify-content: space-between;"> <span>Organization</span> <span>2-6166</span> </div>					
<b>7. Remarks</b>					
These documents form the Design Procurement Specification issued to the Chance-Vought Corp.  Note: Decision has not been made as to which Nose Cap configuration will be implemented on D-8, Boeing's or Chance-Vought's.					
1-15-62 *submitted monthly thereafter 2-6161-0-5		<b>187</b>		D2-5697-16 Vol. IV	
				Page 104.5	

1.4.1.1		<b>QUALIFICATION TEST PLAN</b>					
Program Element No.						Brief No.	
<b>1. Item Tested</b> Nose Cap Aero Pressure Transducer Spec. & Dwg. No. (s) D2-7382-C, -1							
Used-On Dwg. No. Supplier Supplier's Address Boeing or Chance-Vought Corp. Supplier's Part Number							
<b>2. Schedule Summary</b>							
Task	Reference Doc. No.	Submittal Dates		Approval			
		Schedule	Actual	Date	By		
Test Plan (1-1)		12-15-62	12-15-62	12-15-62			
Test Requirements							
Test Procedures							
Start Test							
Complete Test							
First Status Report*							
Final Report							
<b>3. Summary of Tests Required</b>							
Test requirements being determined.							
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>							
Unknown							
<b>5. Test Conducted by:</b>							
Organization		Boeing or Chance-Vought			Location		
<b>6. Required Test Witnesses</b>							
Organization		Communications and Transducers Unit 2-6177					
<b>7. Remarks</b>							
These documents form the Design Procurement Specification issued to Chance-Vought Corp.  Note: Decision has not been made as to which Nose Cap configuration will be implemented on D-3, Boeing's or Chance-Vought's. <div style="text-align: right;">Date</div>							
1-15-62 *submitted monthly thereafter 2-6181-0-5		<div style="font-size: 24pt; font-weight: bold;">188</div>			D2-5697-16 Vol. IV		Page 164.6

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# QUALIFICATION TEST PLAN

Program Element No.

Brief No.

1. Item Tested

SIGNAL CONDITIONING CIRCUITRY PACKAGES

Spec. & Dwg. No. (s)

Used-On Dwg. No.

Supplier

The Boeing Company

Supplier's Address

Supplier's Part Number

2. Schedule Summary

Task	Reference Doc. No.	Submittal Dates		Approval	
		Schedule	Actual	Date	By
Test Plan	D2-5697-16 Vol IV	8-18-61	1-21-62	1-17-62	L. J. Thompson
Test Requirements		4-1-62			
Test Procedures		6-1-62			
Start Test		6-27-62			
Complete Test		2-21-63			
First Status Report*		7-30-62			
Final Report		2-21-63			

3. Summary of Tests Required I Qualification testing is anticipated in the following environmental areas:

## ENVIRONMENT

1. Vibration

2. Shock

3. Temperature & Cooling

4. Humidity

5. Acceleration

## GENERAL CONDITIONS

Complex, shaped spectrum; 7.5G(RMS) 5 to 2000 cps, 30 min each in three directions

See D2-7481 Appendix "A" for procedures and requests

Requirements & Procedures not yet documented

Requirements & Procedures not yet documented

Requirement will depend upon design

II Qualification testing to determine electrical characteristics under the environmental conditions of I will be required.

4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)

Existing environmental and electrical facilities will be adequate for anticipated testing. Test fixtures will be required; however, these will be available from the development test program.

5. Test Conducted by:

Organization

Location

The Boeing Company

Seattle

6. Required Test Witnesses

Organization

2-5636-0 Dyna-Sear Test Data Systems Unit  
2-6162-1 Structure and Installation Group

7. Remarks

Date

12-18-61

1-15-62

\*submitted monthly thereafter  
2-6181-0-5

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TEST DATA SYSTEMS

Program Element No.

1.4.1.3

Brief No.

1

Item Tested: 3000°F Surface Temperature Transducer

Reclassified - see Program Element No. 1.4.1.1, Brief 1. Page 164.1

<b>2.0.0</b>	<b>QUALIFICATION TEST PLAN</b>				<b>1</b>	
<b>Program Element No.</b>					<b>Brief No.</b>	
<b>1. Item Tested</b> <div style="margin-left: 40px;">AGE and Facilities</div> <div style="margin-left: 40px;">Spec. &amp; Dwg. No. (s)</div> <div style="margin-left: 40px;">Used-On Dwg. No.</div> <div style="margin-left: 40px;">Supplier</div> <div style="margin-left: 40px;">Supplier's Address</div> <div style="margin-left: 40px;">Supplier's Part Number</div>						
<b>2. Schedule Summary</b>						
<b>Task</b>	<b>Reference Doc. No.</b>	<b>Submittal Dates</b>		<b>Approval</b>		
		<b>Schedule</b>	<b>Actual</b>	<b>Date</b>	<b>By</b>	
Test Plan						
Test Requirements						
Test Procedures						
Start Test						
Complete Test						
First Status Report*						
Final Report						
<b>3. Summary of Tests Required</b>  <div style="margin-left: 40px;">AGE will generally not be subject to separate formal qualification tests. Suitability of items of AGE for use on the Dyna-Soar Program will be on the basis of prior usage or testing, or upon the system compatibility, integration or functional testing accomplished in conjunction with the program operational and developmental testing.</div>						
<b>4. Special Facilities and/or Test Equipment (Include Estimated Lead Time)</b>						
<b>5. Test Conducted by:</b> <div style="display: flex; justify-content: space-between;"> <span><b>Organization</b></span> <span><b>Location</b></span> </div>						
<b>6. Required Test Witnesses</b> <div style="margin-left: 40px;"><b>Organization</b></div>						
<b>7. Remarks</b>  <div style="margin-left: 40px;">Individual test plan sheets will be included herein for those items which may require limited qualification testing as test requirements are determined consistent with program schedules.</div> <div style="text-align: right; margin-top: 10px;">Date 7-24-61</div>						
*submitted monthly thereafter 2-6181-0-5		<b>191</b>		D2-5697-16 Vol. IV		Page 167